Number of Licenses	Description of areas	Examples
1	Nationwide	Narrowband PCS[141], 1.6 GHz band[142]
5	Narrowband PCS Regional	Narrowband PCS[143]
6	Economic Area Groupings (EAG)	220 MHz,[144] Blocks A/B/D/E, Lower 700 MHz[145]
12	Regional Economic Area Groupings (REAG)	Wireless Communication Service (WCS)[146]
51	(see note below)	A & B-Block PCS[147]
51 or 52	Major Economic Areas (MEA)	WCS,[148] 929/931 MHz Paging[149]
175	Economic Areas (EA)	220 MHz,[150] 800 MHz SMR,[151] Paging,[152] Multiple Address Systems[153]
493	(see note below)	C/D/E/F-Block PCS[154]
734	306 Metropolitan Statistical Areas (MSA) plus 428 Rural Service Areas (RSA)	Cellular,[155] Block C, Lower 700 MHz[156]

[141] See 47 C.F.R. § 24.102(a)

[142] *See* 47 C.F.R. § 27.6(f).

[143] See 47 C.F.R. § 24.102(b).

[144] **See** 47 C.F.R. §§ 90.7, 90.761(b).

[145] *See* 47 C.F.R. § 27.6(c)(1).

[146] See 47 C.F.R. § 27.6(a).

[147] **See** 47 C.F.R. § 24.202(a). These fifty-one areas were used under licenses issued by Rand McNally & Company for certain specific radio services, not including AWS, and are therefore not available for consideration in this proceeding. **See** Copyright Liabilities, Public Notice, 11 FCC Rcd 22,429 (MMB 1996).

[148] **See** 47 C.F.R. § 27.6(a). WCS **MEA** number 52 consists of the Gulf of Mexico.

[149] See 47 C.F.R. § 22.503(b)(2), (3). The fifty-one paging **MEAs** do not include the Gulf of Mexico.

[150] *See* 47 C.F.R. §§ 90.7, 90.761(a)

[151] See 47 C.F.R. §§ 90.7, 90.681.

[152] *See* 47 C.F.R. § 22.503(b)(2), (3).

[153] *See* 47 C.F.R. § 101.1315.

[154] **See** 47 C.F.R. § 24.202(b). These 493 areas were used under licenses issued by Rand McNally & Company for certain specific radio services, not including AWS. See Copyright Liabilities. Public ***Notice.*** 11 FCC Rcd 22.429 (MMB 1996).

[155] See 47 C.F.R. § 22.909.

[156] *See* 47 C.F.R.§ 27.6(c)(2).

70. We seek comment on these and other possible approaches as applied to the 2500-2690 MHz band. As indicated in the chart above, options include:

71. ***Licensing these bands on a nationwide basis.*** Nationwide licensing provides the maximum advantages of large-area licenses, and it may disadvantage applicants interested in limited service areas. We seek comment on the extent to which nationwide licenses maximize the opportunity to provide the widest array of services and business plans. We also seek comment on whether nationwide licensing provides the necessary incentives for fostering the growth of existing technologies while encouraging the development of new applications. In addition, we seek comment on whether the adoption of nationwide licensing provides potential savings to the time and cost of developing applications and manufacturing equipment to operate in the spectrum at issue in this proceeding. We seek comment as to whether nationwide licensing would affect educational, telemedicine or medical institutions located in particular geographic areas.

72. ***Licensing this spectrum, or a subset of this spectrum, using local area licenses.*** Under this approach, the Commission could license this spectrum, or some part of this spectrum, using BTAs or aggregations of counties that approximate BTAs. The most compelling argument for that approach is that we used BTAs when auctioning unused MDS spectrum in 1996. A similar approach when auctioning unused ITFS spectrum would be consistent and would arguably make it easier for licensees to aggregate spectrum derived from MDS with spectrum derived from ITFS. We seek comment on whether local area licenses are preferable to nationwide or regional licenses, and if so which local area licensing scheme is preferable. We also seek comment on how local area licenses would affect educational, telemedicine or medical institutions seeking **ITFS** service.

73. ***Licensing these bands using large, regional licenses.*** We could license these hands using areas comparable to the six large, regional Economic Area Groupings (EAGs), the twelve slightly smaller Regional Economic Areas (REAs), or the fifty-two Major Economic Areas (MEAs). To ensure consistency with our previous MDS auction, it may be best to choose boundaries aligned with BTA boundaries, i.e., to fashion large regional GSAs comprised of multiple BTAs. While we are aware of interest in BTA-sized licenses, we seek comment on whether there **is** any demand for regional licenses. We seek comment on what specific large regional licensing areas would be appropriate if we choose to follow that approach. We also seek comment on whether the opportunity to aggregate regional licenses would be sufficient for those seeking to build a nationwide footprint. We also seek comment on how the use of large regional licenses would affect educational, telemedicine or medical institutions seeking ITFS service.

74. Licensing a portion of this spectrum using a nationwide or regional approach, and the remaining portion using smaller geographic areas. Commenters supporting this approach should indicate which spectrum in these bands should be licensed on a nationwide or regional basis and which spectrum should be licensed using small geographic areas. In addition, if commenters support licensing based on service areas other than those discussed above, they should discuss why other designations are more appropriate. We seek comment on how such an approach would affect educational, telemedicine or medical institutions seeking ITFS service.

75. We point out here that Rand McNally is the copyright owner of the Basic Trading Area and Major Trading Area Listings, which list the counties embodied in each BTA, as contained in Rand McNally's ***Commercial Atlas & Marketing Guide***.[157] Both the WCA and the Commission have

[157] *See* Rand McNally **2003** ***Commercial Atlas & Marketing Guide*** at **40-43**

agreements with Rand McNally to use Rand McNally's copyright MTA/BTA listings and maps.[158] These agreements authorize the conditional use of Rand McNally's copyright material by Commission MDS licensees and requires interested persons using this material to include a legend on reproductions indicating Rand McNally's ownership, and provides for payment of a one time license fee to Rand McNally.[159] Under the terms of the WCA license agreement, license fees are to be paid within ten business days after the date that MDS BTA authorization(s) are issued by the Commission.

76. These agreements do not explicitly address ITFS channels that the Commission does not license as a result of the *MDS Auction R&O*.[160] Thus, if we select Rand McNally's **BTAs** as the service definition for ITFS geographic area licenses, a question arises as to whether an ITFS licensee would have to obtain a copyright license (either through a blanket license agreement or some other agreement) from Rand McNally.[161] We are concerned that an ITFS geographic area licensee might not be able to rely on the grant of a BTA-based authorization from the Commission as a defense against any claim of copyright infringement brought by Rand McNally against such grantee. Accordingly, we seek comment on whether BTAs are appropriate for ITFS.

(ii) Bandwidth for Licenses

77. We also seek comment on the appropriate size of the spectrum block or blocks to assign to ITFS geographic area licensees. The individual channels for MDS and ITFS spectrum in the 2500-2690 MHz band are six megahertz wide. One option would be to issue a single geographic area license for all unencumbered **ITFS** spectrum in a given market, region, or nationwide. In the case of MDS, the Commission awarded a single BTA license covering all unencumbered MDS channels.[162] A second option would be to issue separate licenses for each individual channel. A third option would be to divide the band into 24 MHz blocks, based upon the fact that many licensees are licensed for blocks of four six MHz channels. In reaching our determination, our intent is to maximize licensee flexibility, provide ITFS geographic area licensees with the spectrum they need to offer technologically advanced and innovative services, and ensure the most efficient utilization of the spectrum.

(iii) International Border Issues

78. In the Canadian and Mexican border areas, availability of this band may be restricted by a border agreement or treaty. [163] As a result, certain segments of the band may not be available in border

[158] See Letter from P. Sinderhrand to W. Caton, Acting Secretary, FCC, Jan. 11, 1996. The Commission incorporated the WCA/Rand McNally agreement by reference in § 2(a)(iii), dated November 29, 2000. On September 18, 1995, Rand McNally reached an agreement with the WCA for a blanket copyright license for the conditional use of the copyrighted material in MDS.

[159] Mass Media Bureau Reminds Licensees that Issuance of a BTA Authorization Triggers Copyright Responsibilities, ***Public Notice.*** 11 FCC Rcd 22.429 (1996) (*BTA PN*).

[160] ***See MDS Auction R&O***, 10 FCC Rcd at 9608.

[161] See, e.g., Revision of Part 22 and 90 of the Commission's Rules to Facilitate Future Development of Paging Systems, ***Second Report and Order and Further Notice*** of ***Proposed Rulemaking,*** 12 FCC Rcd 2732, 2735 n.3 (1997); ***BTA PN,*** 11 FCC Rcd at 22,429.

[162] *MDS Auction R&O*, 10 FCC Rcd 9589.

[163] ***See e.g.,*** Interim Arrangement Concerning the Use of the Frequency Bands 2150 – 2162 MHz and 2500 – 2690 MHz by MCS and MDS Stations Near the Canada/United States of America Border (dated Jun. 25.2002).

areas or licensees may need to comply with limitations on power, antenna height and use which may make geographic area licenses in these areas less attractive. In other services where we have implemented geographic area licensing, we did not distinguish between border areas and non-border areas.[164] We propose to license all geographic areas on a uniform basis without regard to whether all or part of the geographic area is in a border area. Geographic area licensees could use any authorized **ITFS** channels subject to the relevant rules and international agreements governing this band. We will review existing agreements to see if it would be useful to initiate discussions with Canada and Mexico concerning renegotiating current agreements in the future to provide greater flexibility than what is allowed by the existing agreements. We believe that applicants are in the best position to assess the effects of any limitations on the use of **ITFS** channels.

b. Unlicensed Use of Unassigned ITFS Spectrum

79. Another possible means of ensuring utilization **of** the unassigned **ITFS** spectrum would he to allow unlicensed operation in the unassigned ITFS spectrum on a primary basis.[165] Unlicensed transmitters may be operated under the provisions of Part 15 of the Commission's Rules.[166] Part 15 transmitters generally operate on frequencies shared with authorized services and at relatively low power. Operation of a Part 15 transmitter is subject to the conditions that the device not cause interference to authorized services, and that the device must accept any interference received.[167] Part 15 transmitters may not operate in certain restricted bands, including 2655-2690 MHz.[168]

80. The use of unlicensed spectrum has grown substantially in the past several years. The innovation allowed by the unlicensed approach has led to an explosion in 802.11(b) wireless local area networks, for example, which has benefited consumers. The Spectrum Policy Task Force recognized that "the Commission's dedication of some lower band spectrum to unlicensed uses, e.g. 2.4 GHz, is yielding significant technological and economic benefits in the form of low-power shortdistance communications and emerging mesh network technologies that should be further encouraged."[169]

81. The characteristics of the **ITFS** spectrum may, depending on the choices we make in this proceeding, make it an attractive choice for unlicensed use. The presence of intense unlicensed operations at 2.4 GHz may mean that equipment efficiencies could be realized for operators that engage in operations in both bands. The intense utilization of unlicensed technologies, such as wireless LANs, by educational, telemedicine or medical institutions today may mean that ITFS and unlicensed technologies can provide educations with a useful hybrid spectrum-based teaching tool.

---

[164] **See** *e.g.*, Amendment of Parts 2 and 90 of the Commission's Rules to Provide for the Use of 200 Channels Outside the Designated Filing Areas in the 896-901 MHz and the 935-940 MHz Bands Alloted to the Specialized Mobile Radio Pool, PR Docket No. 89-553, ***Second Report and Order and Second Further Notice of Proposed Rule Making,*** 10 FCC Rcd 6884,6908 (1995).

[165] For further discussion concerning unlicensed operation in the 2500-2690 MHz band, including discussion **of** the current rules relating to unlicensed operation in these bands, see Section III.E.6, ***infra.***

[166] See 47 C.F.R. Part 15.

[167] **See** 47 C.F.R. § 15.5.

[168] 47 C.F.R. § 15.205

[169] ***Spectrum Policy Report*** at 40.

82. We therefore seek comment on the advantages and disadvantages of allowing unlicensed technologies to operate in current white space in the ITFS spectrum, and where ITFS licenses are returned to the Commission, on a primary basis. Would allowing unlicensed use of the ITFS spectrum on a primary basis provide educators with a useful new tool? Is it possible to allow unlicensed operation without undermining current ITFS operations (including educational, telemedicine or medical uses)? If so, what rules and technical requirements would be necessary to ensure sufficient interference protection to existing, licensed ITFS facilities? Should any antenna requirements be imposed? What would be the appropriate power and/or field strength limits for unlicensed transmitters operating on such a basis? Could GPS or other location techniques be incorporated into an unlicensed device so it could determine its precise location and identify licensed users in its vicinity by accessing a database? Would such an approach be reliable, and could it be combined with other methods to prevent interference to licensed services? If we ultimately revise the band plan for the 2500-2690 MHz band, particularly in a fashion segmenting low power and high power operations, is unlicensed use preferable in one portion but not the other?

5. Geographic Area Licensing for Current Licensees

a. Geographic Area Licensing for MDS BTA Authorization Holders

83. Under the current rules, qualified auction winners were granted licenses for BTAs. A BTA authorization holder may provide service within its BTA, excluding the PSA of incumbent stations and previously proposed MDS and ITFS facilities.[170] A BTA authorization holder, however, must also apply for an individual station license for each transmitter within its BTA.[171] In other services utilizing geographic area licensing, however, a geographic area licensee may generally construct a new transmitter within its licensed area and on a channel covered by its geographic area license so long as (1) the construction complies with the Commission's interference and other rules, (2) an environmental assessment is not required, (3) international coordination is not required, or (4) the proposed transmitter would not affect a radiofrequency quiet zone.[172] We believe that this approach results in efficient service to the public and fewer unnecessary regulatory burdens upon licensees and the Commission. For the reasons noted above, we believe that MDS BTA authorization holders should not be required to obtain individual station licenses for transmitters. We also see no basis for treating MDS BTA authorization holders differently than ITFS geographic area licensees.[173] Accordingly, we tentatively conclude that MDS BTA authorization holders should be allowed to place transmitters anywhere within their service area without prior authorization so long as the operation complies with the applicable service rules and that do not affect radiofrequency quiet zones or require environmental review or international coordination. We seek comment on this tentative conclusion.

84. We also propose to modify the procedures that apply when an incumbent license within a BTA is forfeited. Under current rules, if an incumbent site-based MDS license is forfeited, the incumbent's service area shall merge and become part of the surrounding BTA service area.[174] The BTA

[170] 47 C.F.R. § 21.924(c).

[171] 47 C.F.R. § 21.925(b).

[172] *See, e.g.*, 47 C.F.R. §§ 90.663, 101.525(a), 101.1009.

[173] *See* paras. 62-65 *supra,* regarding geographic area licensing for unassigned ITFS spectrum.

[174] 47 C.F.R. § 21.932(a).

authorization holder, however, cannot operate within that area until it files a long form application to operate a transmitter and the Commission grants that application.[175] In other wireless services, frequencies associated with cancelled or forfeited incumbent authorizations automatically revert to the geographic license holder.[176] We believe that requiring geographic area licensees to obtain a separate authorization prior to operating within the area of a cancelled or forfeited incumbent license is an unnecessary regulatory burden and causes delays in service. Consistent with the approach we have taken in other wireless services, we tentatively conclude to modify the rules to provide that in the case where an incumbent license cancels or is forfeited, the right to operate would automatically revert to the licensee that holds the BTA license.[177]

b. Geographic Area Licenses for Site-Licensed Incumbents

85. In tandem with our proposal to use geographic areas to license ITFS spectrum, we must assess the potential impact of this proposal on incumbent ITFS licensees that have site-based licenses. Previously, when implementing geographic area licensing for spectrum that had incumbents, the Commission traditionally has used an "overlay" licensing approach where the Commission grandfathered (protected) existing constructed and operating stations[178] or provided for specified relocation periods. While an overlay approach has worked well in the past, the Coalition contends that there are inherent difficulties with an approach that allows incumbents to remain in place indefinitely because high-power video and low-power cellular systems will share this band.[179] The Coalition believes these difficulties could hinder the implementation of new advanced services in this band because most geographic area licensees and incumbents would probably use the band to provide a low-power two-way service,[180] while some incumbent licensees are using the band to provide high-power video operations (educational or commercial wireless cable).

86. Since we are proposing to protect incumbent operations on current ITFS channels, we must define the protected areas. The Coalition proposes to give each existing site-based MDS and ITFS licensees a GSA, based on the current rules.[181] In this regard, we note that applicants for new stations on ITFS channels must provide protection to incumbents based on PSAs.[182] We note that MDS incumbents

---

[175] 47 C.F.R. §§ 21.925(c)(4), 21.932(c).

[176] ***See, e.g.***, 47 C.F.R. § 101.1331 (MAS): Amendment of the Commission's Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands, ET Docket No. 95-183, 12 FCC Rcd 18600, 18637-8 ¶ 79 (39 ***GHz Report and Order).***

[177] ***See, e.g.***, 39 ***GHz Report and Order,*** 12 FCC Rcd at 18637-8,179

[178] (*e.g.*, geographic area licensees must protect existing co-channel stations located within their geographic service area) ***See*** Amendment of the Commission's Rules Regarding Multiple Address Systems, WT Docket No. 97-81, 15 FCC Rcd 11,956 (2000); ***See MDS Auction R&O,*** 10 FCC Rcd 9589.

[179] Coalition Proposal at 10.

[180] Other licensees agree that many existing ITFS licensees will move or are contemplating moving away from traditional one-way high-power video-based operations. ***See*** Joint Comments of ITFS Parties at **2.**

[181] Coalition Proposal at **20**

[182] 47 C.F.R. §§ 74.903, 21.902(d). Beginning on September 15, 1995, the initial service boundaries were frozen, i.e., the circular PSA boundaries were not to be changed regardless of whether or not the licensee subsequently (continued....)

that obtained their licenses prior to our 1996 MDS BTA auction have 35-mile PSAs around their main stations.[183] Except with respect to situations where MDS and ITFS PSAs overlap, we have not received many significant expressions of concern over electrical interference resulting from this approach. Therefore, we propose to provide each incumbent on a current ITFS channel and each MDS incumbent with a PSA based on a circle with a 35-mile radius around its main station, subject to the exceptions discussed below. We ask for comments on this proposal and, in addition, we inquire whether we should change the name of such areas from PSAs to GSAs. A benefit of making this change would be to allow incumbents to change the location of their transmitters without prior Commission approval.

87. In discussing the issue of protected areas for incumbents, the Coalition points out that the rules defining protected areas have changed over the years. As a result, the PSAs assigned to co-channel incumbent MDS and ITFS licensees can overlap.[184] The Coalition argues that since none of the licensees with service areas that overlap can satisfy the interference protection criteria in the overlap area, no one can operate in these areas.[185] According to the Coalition, the MDS/ITFS industry has informally developed a method for handling this problem. The Coalition notes that the general method for dividing the overlap area is to draw a straight-line (chord) beginning and ending at the two points where the protected service areas intersect.[186] This approach has the effect of drawing a boundary along the line connecting the ends of the football-shaped overlap area, with the licensees on either side agreeing to limit the interference they generate outside their boundaries. The Coalition proposes that we codify this approach.

88. The boundary-splitting proposal described above could leave some reception sites marooned on the "wrong" side of the line relative to ITFS stations from which they have been receiving service. Based on that concern, and on the fact that some registered reception sites fall outside a 35-mile radius, the Coalition proposes that we grandfather certain ITFS reception sites located outside the PSA.[187] Under the Coalition's proposal, ITFS licensees would be required to provide technical information to co-channel and adjacent channel licensees concerning the reception sites within twenty-one days of a request.[188] Generally, however, we do not protect sites outside the established protected areas in other

(Continued from previous page)
moved its transmitter. Id. An ITFS licensee's PSA includes the area within a **35-mile** radius of its transmitter site plus any reception sites beyond that radius that were registered with the Commission on September 17, **1998.**

[183] *See47* C.F.R. §§ 21.902(d), 21.933(a).

[184] Effective September 15, **1995,** the Commission expanded the PSAs of incumbent site-based MDS and ITFS licensees from fifteen miles to thirty-five miles. See Amendment of **Parts** 21, **43,** *14,* **78,** and **94 of** the Commission's Rules Governing Use of the Frequencies in the 2.1 and *2.5* GHz Bands Affecting: Private Operational-Fixed Microwave Service, Multipoint Distribution Service, Multichannel Multipoint Distribution Service, Instructional Television Fixed Service, & Cable Television Relay Service, Second ***Report and Order,*** Gen. Docket Nos. **90-54** and **80-113,** 10 FCC Rcd **7074 (1995).** In doing **so,** it created a number of overlaps between licensees whose PSAs had not overlapped before the standard PSA radius was increased.

[185] Coalition Proposal at **20-21** (*e.g.*, the **rule** changes have created a "no man's land").

[186] See Coalition Proposal Appendix C for a detailed explanation.

[187] Coalition Proposal at 35.

[inn] ITFS licensees must identify the location of such receive sites, the antenna make and model and the antenna height above ground and, if known, the adjacent channel D/U ratio that can be tolerated. **See** Coalition Proposal at **35-36.**

services where we have implemented geographic area licensing.[189] Requiring licensees to provide such additional technical information is contrary to our goal of reducing regulatory burdens. We are also concerned that providing continued protection to out-of-area reception sites could confuse the definition of GSAs for site-licensed incumbents, whether or not we choose to allow continued high-power operations in part of the band. We invite comment on the costs versus benefits of continuing to protect reception sites that fall outside the 35-mile service areas of incumbents, or beyond boundaries established mathematically by splitting areas of overlap. Commenters supporting the Coalition's position on this issue should provide information on how many receive-only sites are located outside the PSAs of stations from which they have been receiving service. We seek comment on alternative ways of addressing this problem.

c. Gulf of Mexico Proceeding

89. ***Background.*** In the ***MDS Report and Order,*** the Commission adopted a licensing plan under which it assigned, through a simultaneous multiple round bidding process, one MDS authorization for each of the 487 BTAs and six additional geographic areas.[190] A BTA authorization holder may construct facilities to provide service over any usable MDS channels within the BTA.[191] A MDS channel is usable if the proposed station design is in compliance with the Commission's interference standards.[192]

90. The signals of a BTA authorization holder cannot interfere with any other BTA authorization holder's signals.[193] In addition, BTA authorization holders cannot interfere with the PSAs of incumbent MDS operators and ITFS licensees within their BTAs.[194] However, the BTA authorization holder may negotiate interference rights with BTA authorization holders and incumbents.[195]

91. On May 21, 1996, the Gulf Coast MDS Service Company (Gulf Coast) filed a Petition for Rulemaking requesting that the Commission amend its rules to permit licensing of MDS and ITFS spectrum in the Gulf of Mexico.[196] Specifically, Gulf Coast sought to have the Commission treat the Gulf of Mexico as one service area and to hold an auction to license service in the area. On November

---

[189] Examples of services where service areas are defined exclusively on the basis of signal strength limits at geographic borders include the lower 700 MHz band (47 C.F.R. § 27.55(a)(2)), broadband PCS (47 C.F.R. § 24.236), Part 27 services in the 2305-2320 and 2345-2360 MHz bands (47 C.F.R. § 27.55(a)(1)), and Part 27 services in the 1390-1395 and 1432-1435 MHz bands (47 C.F.R. § 27.55(a) (3)).

[190] ***See MDS R&O***, 10 FCC Rcd at 9608-09; ***see also GulfNotice,*** 17 FCC Rcd at 8448 ¶ 7. Rand McNally defined 487 BTAs in the 1992 ***Commercial Atlas and Marketing Guide.*** Because Rand McNally did not include some geographic areas that were the subject of the MDS auction, those areas were added to Rand McNally's list, bringing the total number for auctioning to 493 authorizations. The six additional areas are American Samoa, Guam, Northern Mariana Islands, San Juan, Puerto Rico; Mayaguez/Aguadilla-Ponce, Puerto Rico; and the United States Virgin Islands. *Id.* at 8447 n.4. ***See also*** 47 C.F.R. § 21.924(b).

[191] ***See MDS R&O***, 10 FCC Rcd at 9615-18; ***see also Gulf Notice***, 17 FCC Rcd at 8448 ¶ 7.

[192] ***See MDS R&O***, 10 FCC Rcd at 9615-18; ***see also GulfNotice,*** 17 FCC Rcd at 8448 ¶ 7.

[193] *See* 47 C.F.R. § 21.902.

[194] **See** 47 C.F.R. § 21.933.

[195] ***See Gulf Notice***, 17 FCC Rcd at 8448 ¶ 8.

[196] Petition for Rulemaking of Gulf Coast MDS Service Company (Gulf Coast Petition) (May 21, 1996)

23, 1998, PetroCom License Corporation (Petrocom), successor in interest to Gulf Coast, amended the petition.[197] PetroCom requested that the Commission authorize two licenses in the Gulf of Mexico and adopt eligibility restrictions to avoid excessive concentration of licenses.[198] Additionally, PetroCom asked the Commission to establish a service area in the Gulf similar to the service areas established in the ***MDS Report and Order.'"*** On August 11, 1999, the Commission sought comment on PetroCom's Amended Petition.[200] On May 3, 2002, the Commission issued the ***Gulf Notice*** seeking comments on Petrocom's amended petition.[201]

92. In the ***Gulf of Mexico MDS NPRM,*** the Commission proposed to establish a GSA in the Gulf of Mexico ("Gulf Service Area").[202] The Commission proposed to adopt the same rules, with certain limitations, as those service areas established in the ***MDS Report and Order.*** The Commission solicited comment on the technical and economic effects of implementing the proposals.[203]

93. ***Discussion.*** Generally, commenters support creation of a Gulf Service Area. However, they express concern over the timing of the adoption of rules for the service area.[204] The commenters seek to delay the licensing of MDS in the Gulf of Mexico until after the Commission establishes mobile service rules,[205] as well as until we address the Coalition's proposals.[206] We note that we are proposing mobile service rules in this proceeding."[207] We believe that by addressing the use of MDS in the Gulf simultaneously with the consideration of other MDS flexibility issues that we decrease any attendant delay in the provision of service in the Gulf of Mexico. Accordingly, we disagree with the commenters that we should defer consideration of all of the issues involving the Gulf of Mexico until after adoption

[197] Amended Petition for Rulemaking of PetroCom License Corporation (Amended Petition) (Nov. 23, 1998).

[198] ***See*** Pleading Cycle Established for Comments on Amended Petition for Rulemaking to Amend Parts **21** and 74 of the Commission's Rules to Permit Licensing in the Multipoint Distribution Service and the Instructional Television Fixed Service for the Gulf of Mexico, ***Public Notice,*** 14 FCC Rcd **13,322** (1999) ***(Amended Petition PN).*** Petrocom also requested that the Commission set aside one of the licenses for small businesses, streamlining of the licensing process, modification of the two-way rules for stations operating in the Gulf. *Id.*

[199] Amended Petition at 4

[200] ***Id.*** The WCA opposed the Amended Petition while PetroCom, Bachow/Coastel, L.L.C. (Bachow/Coastel) and RIG Telephones Inc. d/b/a Datacom (Datacom) each filed comments on September 10, 1999. See reply comments on September **27,** 1999. Bachow/Coastel, WCA and Datacom tiled reply comments. Finally. on October 8. 1999 and November 10, 1999, WCA and PetroCom **filed** comments in the form of a letters. These letters were not authorized pleadings pursuant to our rules; however, in order to develop a full and complete record, they were incorporated as part of the record in this proceeding.

[201] ***GulfNotice,*** **17** FCC Rcd **8446.**

[202] ***See GulfNotice,*** 17 FCC Rcd at 8447 ¶ 2

[203] ***Id.***

[204] PetroCom Comments at 3-5; Stratos Offshore Services Company Comments ***at*** 2-3 (Stratos Offshore); WCA Comments at 4; PetroCom Reply Comments at 1-4.

[205] See PetroCom Comments at 3-5; PetroCom Reply Comments at 1-4.

[206] ***See*** WCA Comments; Stratos Offshore Comments at 2-3.

[207] ***See*** para. **132,** ***infra.***

of mobile service rules. Resolving the primary issue of whether to establish a Gulf Service Area is a preliminary step that does not have to wait for the adoption of final rules in this proceeding. As no commenter opposed the establishment of a Gulf Service Area, we adopt the proposal to create a Gulf service area. The parties who asked the Commission to establish a Gulf Service Area state that establishing such a service area would allow specialized businesses that operate in the Gulf of Mexico to obtain advanced communications services that are currently unavailable to them and that would allow these businesses to operate more efficiently.[208] The Commission has also noted in other services that creating a service area for the Gulf of Mexico region will help meet the growing communications needs of businesses operating in the Gulf.[209]

94. We note that we have incorporated, as WCA asks, the Gulf of Mexico proceeding into this comprehensive review of the entire band.'" Although the Commission proposed to create a Gulf Service Area for MDS operations, the Commission proposed to exclude all ITFS channels from licensing in a Gulf Service area.'" The Commission indicated that *ITFS* licensees have not expressed an interest in obtaining licenses in the Gulf of Mexico, the area most likely has little need for educational service, and the requested commercial use does not require the full bandwidth available in the 2500-2690 MHz band.'" No commenter specifically addressed the Commission's proposal to exclude ITFS channels."' In order to ensure that we have a full and complete record, we seek further comment on whether we should reallocate ITFS channels in the Gulf Service Area for other uses. We specifically seek comment on whether we should consider unlicensed uses.

95. Unlike BTAs established by Rand McNally, the Gulf Service Area does not have a significant population center and is based primarily on the geographic confines of the Gulf and on the commonality of commercial interests of the potential users of any service provided.[214] Thus, the Commission proposed to use the same boundary definitions for this Gulf Service Area as adopted in the *WCS R&O*.[215] As a result, the Commission proposed that land-based license regions abutting the Gulf of Mexico will extend to the limit of the territorial waters of the United States in the Gulf of Mexico, which is the maritime zone that extends approximately twelve nautical miles from the United States coastline.[216] Beyond that line of demarcation, the Commission created a Gulf Service Area, which extended from that line outward to the geographic limits consistent with international agreements.'"

---

[208] ***See*** Gulf Coast Petition at 4

[209] ***See. e.g.***, Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service ("WCS"), GN Docket No. 96-228, ***Report and Order,*** **12** FCC Rcd 10785,10816¶ 59 (1997)(*WCS R&O*).

[210] ***See*** WCA Comments at 7.

[211] ***See GulfNotice,*** 17 FCC Rcd at 8450 ¶ 13.

[212] *Id.* at 8450¶ 13

[213] We note that PetroCom's Comments and Reply Comments refer to MDS/ITFS spectrum. PetroCom Comments at ***5;*** PetroCom Reply Comments at ***2***.

[214] ***See Gulf Notice***, 17 FCC Rcd at 8452¶ 16.

[215] *Id.* at 8453¶ 18

[216] ***Id.***

[217] ***Id.***

96. Although WCA supports the Commission's proposal to establish the demarcation line of the Gulf Service Area at twelve nautical miles from the coastline,'" PetroCom maintains that the better approach is to employ the boundaries used for cellular service in the Gulf.[219] In the ***Gulf Cellular Order.*** the Commission established the Gulf Service Area boundary as the land-water line. PetroCom argues that because current **MDS** and **ITFS** licensees are providing fixed services that they do not require protection beyond the shore."' Additionally, PetroCom asserts that allowing land based MDS/ITFS operations to extend into the Gulf of Mexico will create interference issues for Gulf operations and discourage Gulf licensees from **fully** developing their systems.'" Moreover, PetroCom asserts that this definition of the inner boundary of the Gulf Service Area is consistent with our Rules, which base BTA boundaries on market areas defined by Rand McNally, which follow county lines.[222] We seek comment on where to establish the demarcation line for the Gulf Service Area.

97. For the most part, commenters to this proceeding did not address the Commission's proposals with regard to licensing MDS in the Gulf of Mexico. Instead, commenters focused their remarks on requesting a delay in the consideration of the issues presented in the ***Gulf of Mexico MDS NPRM*** until after the Commission considered the Coalition's proposal to transform the service. Accordingly, we do not believe the record has developed satisfactorily to resolve issues concerning the amount of spectrum to license in the Gulf Service Area, competitive bidding, partitioning and disaggregation, interference protection requirements, construction period, and license term. We invite commenters to address these issues in the broader context of this comprehensive proceeding. However. where differences exist with regard to the treatment of Gulf licenses, commenters should explain those differences and expound upon the rationale for the different treatment.

6. Transition to New Band Plan

98. An important issue relating to the adoption of any new band plan is the mechanism to use to transition existing licensees to a new band plan. There are four alternative kinds of transition mechanisms that are relevant in this context:[223] expanded rights overlay licenses combined with mandatory relocation of incumbents; expanded rights overlay licenses with grandfathering of incumbents; expanded rights overlay licenses combined with voluntary band-clearing restructuring incentives for incumbents; and expanded rights granted to incumbent licensees under existing licenses.[224] The Coalition's proposal most nearly resembles the second of those four approaches, though it reflects elements of the fourth approach as well.

---

[218] WCA Comments at 6.

[219] PetroCom Comments at 5-6 ***citing*** Cellular Service and Other Commercial Mobile Radio Services in the Gulf of Mexico, ***Report and Order,*** 17 FCC Rcd 1209 (2001) ***(Gulf Cellular Order);*** PetroCom Reply Comments at 4-6 ***citing Gulf Cellular Order,*** 17 FCC Rcd at 1219¶ 31.

[220] PetroCom Comments at 6.

[221] PetroCom Reply Comments at 5

[222] PetroCom Comments to the Amended Petition at 4

[223] ***Spectrum Policy Report*** at 49

[224] ***Id.***

99. The Coalition proposes that we rely on a combination of regulatory and market forces to effect the transition to its proposed band plan. The Coalition recommends a market-by-market transition process to the new band plan that allows MDS and **ITFS** licensees to continue to operate pursuant to the current rules until an MDS or **ITFS** licensee or lessee (called a "proponent") triggers the transition process.[225] In general, the Coalition would require the Proponent to fund any conversion costs incurred by ITFS operators but would require MDS operators to pay their own conversion costs.[226] **In** addition, any party offering a commercial service using MDS or *ITFS* channels would be required to reimburse the Proponent for its *pro rata* share of the cost of transitioning the facilities that it uses and the cost of transitioning facilities associated with any overlapping transition impact area.[227] A Proponent would be permitted. at its sole discretion and at any time, to trigger the transition process with respect to any MDS or **ITFS** licensee that has a GSA located in whole or in part within 150 miles **of** any portion of its GSA.[228] At any time during the transition planning period, the Proponent would be permitted, in its sole discretion, to decide not to proceed with the transition process in whole or in part.[229] The Coalition plan would require the Commission to enact detailed rules concerning the mechanisms of the transition process and set forth nine safe harbors describing proposals that licensees subject to transition would have to accept from proponents.[230] The Coalition does not recommend that we set any fixed deadlines.

100. We seek comment on whether we should impose a date certain for completing the transition process if we adopt a process resembling that proposed by the Coalition. The Coalition recognizes that the absence **of** specific deadlines in its proposal could leave hold-out licensees in a position to obstruct the re-channelization process, but urges that we adopt a very detailed list of criteria defining what sorts of proposals **ITFS** licensees must accept if Proponents offered to implement them or pay for their implementation.[231] This proposal resembles the process we have applied for clearing incumbents from the upper 200 channels in the 800 MHz band to make way for Specialized Mobile Radio operators licensed to Economic Areas.[232] However, the Coalition proposes a **far** more detailed set of criteria for mandatory negotiations between MDS and **ITFS** operators, and does not provide for reimbursement of MDS operators undergoing involuntary conversion to lower signal strengths.

101. **As** an alternative, we ask whether we should impose a date or dates certain by which all licensees must comply with our new interference rules. In that regard, an ***ad hoc*** group of MMDS licensees has expressed concern that the detailed transition rules that the Coalition proposes as an alternative to specific deadlines would be cumbersome. These licensees view the plan as requiring complex reimbursement schemes, 150-mile daisy chains and other complications resulting from the voluntary market-by-market approach.[233] They assert that the net result of adopting the Coalition Plan

[225] A detailed description of the Coalition transition process is contained in Appendix C.

[226] Coalition Plan, Appendix **B** at **5**.

[227] *Id.*, Appendix B at **28-29.**

[228] *Id.*, Appendix B at **13.**

[229] ***Id.***, Appendix **B** at **14.**

[230] *Id.*, Appendix B at **21-28.**

[231] The Coalition does not propose that any MDS licensees receive compensation from Proponents.

[232] *See* **47** C.F.R. § **90.699.**

[233] Comments **of** MMDS Licensee Coalition ("MMDS Licensees"), filed November **14,2002,** at **3.**

would be to delay the transition rather than to expedite it because the parties would be embroiled in constant bickering over the terms of transition and who should be responsible for what costs.[234]

102. Another alternative would allow incumbents to bargain freely for the best inducements they can obtain from Proponents to convert their operations prior to a deadline for conformance with the new band plan, while requiring incumbents to fund their own conversions if they do not accept a Proponent's offer to fund the conversion ahead of time. Under such an approach, the incumbent's bargaining leverage would be greater the further in the future we established the conversion deadline. and it would gradually diminish as the deadline approached. We believe that we have the legal authority to apply such deadlines pursuant to Section 316(a) of the Communications Act, as amended, which permits us to modify a license or construction permit if such action is in the public interest.[235] Section 316(a) requires that we notify the affected stations of the proposed action, the public interest reasons for the action, and afford at least thirty days to respond. This procedure is now set forth in Section 1.87 of our Rules.[236] Licenses may be modified through rule making,'" as we did when establishing the cellular telephone service.[238] We seek comment on alternative means by which we might lawfully and efficiently implement a schedule for modifying existing MDS and ITFS stations, such as the adoption of a single deadline by rulemaking rather than through station-by-station processes.

103. A second possible approach would be to adopt a three-phase transition process: a voluntary negotiation period, during which incumbents could bargain freely for the best inducements they could obtain from Proponents, followed by a mandatory negotiation and conversion phase, during which Proponents could compel incumbents to reduce their signal strengths by offering to fund their conversions, based on specific criteria to be defined in our rules. In the final stage, Proponents would be entitled to compel incumbents to take whatever steps are necessary to reduce their signal strengths at the incumbents' own expense. Such an approach would resemble the band-clearing procedures that we adopted for terrestrial fixed microwave services in the bands that we reallocated to PCS,[239] except that MDS and ITFS incumbents would ultimately be required only to reduce their signal strengths at their GSA boundaries, not cease operations altogether or relocate.

---

[234] *Id.*

[235] *47* U.S.C. § 316(a). We note that converting existing licensees to geographic service area licenses would eliminate the need to modify authorizations for individual transmitters.

[236] *47* C.F.R. § *1.87.*

[237] *See* Amendment of Part *22* of the Commission's Rules to Provide for Filing and Processing of Applications for Unserved Areas in the Cellular Service and to Modify Other Cellular Rules, **Notice** of *Proposed Rulemaking, 5* FCC Rcd *1,044, 1,048* ¶ *25* (1990), *citing WEEN, Inc. v. United States, 396* F.2d *601* (2d Cir. *1968); American Airlines, Inc. v.* **CAB,** *359* F.2d *624* (D.C.Cir. *1966); Upjohn* Co. *v. Food and Drug Admin., 911* F.2d 1583 (D.C.Cir. *1987).*

[238] *See generally,* Cellular Communication Systems (Cellular Systems), *Report and Order, 86* F.C.C.2d *469* (1981), *modified, 89* F.C.C.2d 58 (1982), *further modified,* 90 F.C.C.2d *571 (1982); appeal dismissed sub nom. United States v. FCC,* No. 82-1526, Slip Op. (D.C. Cir. Mar. *3, 1983);* Rules for Rural Cellular Service, *First Report and Order, 60* Rad. Reg. 2d *1029* (1986), *modified, 2* FCC Rcd *733* (1987), *further modified,* 2 FCC Rcd *3366 (1987).4* FCC Rcd 5272 (1988), *3* FCC Rcd *4403* (1988), *4* FCC Rcd *4.464* (1989).

[239] *See 47* C.F.R. §§ *101.69-101.79.*

104. A third alternative would be to refrain from providing for a voluntary negotiation period and proceed immediately to a mandatory negotiation and conversion phase, later to be followed by a sunset date after which incumbents would be required to assume their own conversion costs. The Commission used this procedure to clear terrestrial fixed microwave services from 18.58-19.3GHz band when the Commission reallocated it to FSS.[240] We seek comments on the benefits and disadvantages of a voluntary negotiation period, and inquire what mandatory conversion requirements should apply if we decide not to adopt a voluntary negotiation period. We seek comment on all of these approaches, on other possible alternatives, on the appropriate date or dates for any deadlines that we might apply under any of the transition proposals and on the criteria that we should apply during any mandatory negotiation and conversion phase, should we choose to adopt one.

105. An altogether different option would be to rely on an auction to restructure the bands."' Such an approach might mitigate the need for a complicated set of transition rules because bidders might be able to obtain efficient packages of encumbered and unencumbered spectrum for new uses without engaging in costly and time-consuming bilateral and multi-lateral negotiations."* The efficacy of such an approach, of course, would depend upon how many incumbents chose to make their licenses available for competitive bidding. Transition rules might be necessary as a fall-back even if we conduct such an auction, to transition incumbent licensees that choose not to participate or receive no bids that induce them to sell.

106. We seek comment on all issues relating to the transition of existing licensees to a new band plan, including, but not limited to, the Coalition Proposal. Commenters addressing this issue should discuss in detail their preferred mechanisms for adopting any transition.[243]

7. ITFS Eligibility Restrictions

107. ITFS main channels account for 120 MHz of the 2500-2690 MHz band. Initially, the Commission intended ITFS stations to provide formal educational and cultural development in aural and visual form to students enrolled in accredited public and private schools, colleges and universities.[244] Generally, our Rules limit eligibility for ITFS to: (1) accredited educational institutions, (2) governmental organizations engaged in the formal education of enrolled students, and (3) nonprofit organizations whose purposes are organizational and include providing educational and educational television materials to accredited institutions and governmental organizations.[245] In 1971, the

[240] *See* 47 C.F.R. §§ 101.85-101.95.

[241] ***See*** Section III.J, ***infra.***

[242] ***See*** Evan Kwerel and John Williams, ***A Proposal for a Rapid Transition to Market Allocation of Spectrum*** (FCC Office of Plans and Policy Working Paper, Nov. 2002).

[243] Some MDS licensees, who also lease ITFS channels, employ CARS for their video operations as Wireless Cable Systems. They would continue to be eligible to be ***CARS*** licensees for those video operations, but not for low power broadband operations. Transition to the new band plan must also consider modification of those operations.

[244] 47 C.F.R. § 74.931(a)(1).

[245] ***See*** 47 C.F.R. § 74.932(a). Under certain circumstances, "wireless cable entities" may obtain access to ITFS channels so long as at least eight other ITFS channels remain available for future ITFS use. ***See*** 47 C.F.R. § 74.990-74.992.

Commission did not see a valid reason to change the ITFS eligibility rules.[246] In **1985,** after recognizing that ITFS signals were reaching the homes of MDS subscribers, the Commission revised the main purpose of ITFS. The Commission determined that the transmission of instructional material for accredited educational institutions was an ***"essential use"*** of ITFS stations, ***i.e.,*** at least some of their capacity had to be used for the transmission of course-oriented formal instructional material.[247] In **1991,** the Commission voiced its support of the role of ITFS in providing improved educational opportunities for all.[248] Consequently, the Commission remained committed to not jeopardizing the current or future ability of **ITFS** to fulfill its primary intended purpose of providing educational material for instructional use.[249] In fact, the Commission expressed its intention to enforce strictly the existing eligibility rules.[250]

108. In many respects, our regulatory policies toward MDS and, to a lesser extent, our treatment of ITFS over the years have represented pioneering movements toward flexible use. We initially limited MDS licensees to common carrier operations and adopted technical rules that limited the service to point-to-multipoint distribution from a single point, but we allowed MDS subscribers to transmit any of a broad range of content types: private television, high speed computer data, facsimile, control information, or other communications capable of radio transmission.[251] In **1983,** the ***First Leasing Decision*** authorized ITFS operators to begin leasing unused channel capacity to commercial entities. Thus, as WCA notes in comments that it filed in our Spectrum Policy Task Force proceeding, "The secondary markets concept (under which licensees could lease the spectrum usage rights to third parties) has been a staple of the Commission's MDS/ITFS rules for twenty years."[252]

109. One byproduct of our flexible use policy toward ITFS has been a reduction in the proportion of ITFS channel capacity used for educational purposes. As the **MDS** industry struggled to achieve commercial viability and ITFS operators sought to generate enough revenue to survive, we gradually relaxed the restrictions on channel leasing. One step at a time, over a fifteen year period, we

---

[246] Amendment of Parts 2 and 74 of the Commission's Rules and Regulations to Establish a **New** Class of Educational Television Service for the Transmission of Instructional and Cultural Material to Multiple Receiving Locations on Channels in the 2500-2690 MHz Frequency Band, Docket No. 14744, ***Second Report and Order,*** 30 F.C.C. 2d 197, 200 ¶ 10 ***("ITFS Second R&O").***

[247] Amendment of Part 74 of the Commission's Rules and Regulations in Regard to the Instructional Television Fixed Service, ***Second Report and Order,*** 101 F.C.C.2d 50, 80 ¶¶ 75-78 (1985) ***(emphasis added) Part 74 Second R&O).*** The Commission also eliminated the requirement to transmit course-oriented material to selected accredited school sites if in lieu thereof the licensee names "the school(s) and the degree(s) or diploma(s) for which the formal programming will he offered and describe[s] the administration of the courses(s)," along with supporting documentation. 47 C.F.R. § 74.931(a)(2).

[248] Amendment of Parts 21.43, 74.78, and 94 of the Commission'sRules Governing Use of the Frequencies in the 2.1 and 2.5 GHz Bands Affecting: Private Operational-Fixed Microwave Service, Multipoint Distribution Service, Multichannel Multipoint Distribution Service, Instructional Television Fixed Service, & Cable Television Relay Service, ***Second Report and Order,*** 6 FCC Rcd 6,764, 6,774 ¶ 48 n.45 (1991).

[249] ***Id.***

[250] ***Id.*** at ***6*** FCC Rcd 6,774 n.45.

[251] Amendment of Parts 1, **2,** and 43 of the Commission's Rules and Regulations to Provide for Licensing and Regulation of Common Carrier Radio Stations in the Multipoint Distribution Service. ***Report and Order,*** 45 FCC 2d 616,617 ¶ 5 (1974).

[252] Comments of WCA in ET Docket No. 02-135, at 5-6, filed Jan. 27,2003

reduced the educational obligations of ITFS operators to a minimal level, ultimately allowing them to lease all but a small fraction of their capacity to commercial operators:

- In 1985 the Commission determined that ITFS licensees would be required to transmit at least 20 hours of instructional programming per week on each of their channels between 8 AM and 10 PM. It also required ITFS operators to preserve their right to recapture at least an additional 20 hours per week. including at least three hours per day on weekdays between 8 AM and 10 PM.[253] The Commission further determined, however, that it would permit commercial channel lessees to build, own, and operate the transmitters involved, provided that ITFS licensees met the above-stated programming requirements.[254]

- By 1991, ITFS operators were increasingly reliant upon MDS operators as a source of revenue and operational support, but MDS operators were finding it difficult to compete against cable television and DBS while simultaneously supporting ITFS. The inability to lease ITFS channels on a 24-hour-per-day basis was impairing the ability of MDS operators to make effective commercial use of ITFS capacity, which depressed the prices that MDS operators were willing and able to pay for ITFS capacity. Thus, ITFS operators willingly acquiesced when the Commission eliminated the time-ofday restrictions on its minimum ITFS transmission requirements and authorized operators to use automatic channel-switching equipment to create the appearance, to end users, of channels that were 100 percent dedicated to commercial programming.[255] We referred to this process as "channel mapping."

- Three years later, the Commission acknowledged that channel-mapping was a costly endeavor and allowed ITFS licensees to load all of the educational programming required for a four-channel system onto one ITFS channel, leaving the other three channels available for full-time leasing to commercial operators.[256] In addition, the Commission determined that ITFS operators need not keep an additional 20 hours per channel available for recapture on their own ITFS channels if, in lieu thereof, the ITFS operator negotiated an option to obtain access to an equal number of hours on another licensee's ITFS or MDS channel within the same market-wide system.[257]

- In 1995, the Commission further relaxed its requirements by deciding that ITFS operators could fulfill their instructional obligations even if no more than one of their reception sites served an accredited educational institution.[258] In 1996, we authorized ITFS operators to expand their effective channel capacity through the use of digital transmission systems, making it possible to deliver more than a hundred channels over the available bandwidth. In doing so, we declined to

[253] Amendment of Part 74 of the Commission's Rules and Regulations in Regard to the Instructional Television Fixed Service, Second Reporf and Order, 101 F.C.C.2d 50.87 ¶ 95 (1985).

[254] *Id.* at 99-91, ¶¶ 98-106.

[255] Amendment of Part 74 of the Commission's Rules and Regulations in Regard to the Instructional Television Fixed Service, Order on Reconsideration, 6 FCC Rcd 6.764 ¶¶ 51-52 (1991).

[256] Amendment of Part 74 of the Commission's Rules and Regulations in Regard to the Instructional Television Fixed Service, *Report* and Order, 9 FCC Rcd 3,360, 3,365 ¶ 18 (1994).

[257] Id. at 3,365 ¶ 20

[258] Id. at 2,920 ¶ 75

require a concomitant increase in the hours of educational programming provided by ITFS operators.[259]

- In 1998, the Commission again declined to increase the hours of educational programming offered on ITFS stations and further relaxed its requirements in four ways. First, we eliminated the requirement that ITFS operators fulfill their minimum educational usage obligations by transmitting such content on their own stations, allowing them the option of transmitting it on other licensees' ITFS or MDS stations.[260] Second, we determined that digital ITFS stations would in most cases be required to use or reserve no more than 5 percent of their transmission capacity for educational programming.[261] Third, we gave ITFS licensees increased flexibility in determining which transmissions would qualify as satisfying the service's educational usage requirements, to include but not be limited to teacher conferencing, remote test administration, distribution of reports and assignments, research toward and sharing work of progress in projects for courses, professional training, continuing education, and other similar uses.[262] Finally, we declined to impose any educational usage requirements upon digital ITFS response stations or response station hubs, based on the understanding that ITFS operators would not be able to control the content of upstream transmissions from end users.[263]

Thus, from 1983 through 1998 we progressively reduced the performance required of ITFS operators while expanding the opportunities for ITFS operators to generate income by leasing out their channels, and we substantially increased MDS operators' access to ITFS spectrum.

110. As noted above, in 1987, we provided MDS licensees the additional option of electing to provide service and be regulated on a non-common carrier (and non-broadcast) basis.[264] In 1998, we revised our rules to allow both MDS and ITFS licensees to construct digital two-way systems capable of providing high-speed, high-capacity broadband service, including two-way Internet service via cellularized communication systems.[265] In 2001, we applied a mobile allocation in the 2500-2690 MHz band.[266] Despite those several decisions removing various restrictions from MDS and ITFS, however, we

[259] Digital Modulation Declaratory Ruling and Order, 11 FCC Rcd at 18872-18873, ¶ 58.

[260] Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-way Transmissions, Report and Order, 13 FCC Rcd 19112, 19166. ¶ 101 (1998).

[261] Id. at 19159 ¶ 89. The Commission also maintained its longstanding requirement that the ITFS operator transmit at least 20 hours per week of educational programming per 6 MHz channel. Id.

[262] *Id.* at 19154 ¶ 81

[263] Id. at 19,155¶ 82.

[264] Revisions to Part 21 of the Commission's Rules Regarding Multipoint Distribution Service, Report and Order, 2 FCC Rcd 4,251 (1987). In 1983, we determined that ITFS operators could choose to provide service on either a private or common carrier basis and would be subject to regulation commensurate with their style of operation. Allocation *R&O*, 94 F.C.C.2d 1203, 1248-1255, ¶¶ 111-129.

[265] Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-way Transmissions, MM Docket No. 97-217, Reporf and Order, 13 FCC Rcd 19,112 (1998), recon., 14 FCC Rcd 12,764 (1999), *further* recon., 15 FCC Rcd 14,566 (2000) (*Two-Way Order*).

[266] Mobile Report and Order, 16 FCC Rcd 17,222 (2001).

have continued to limit the classes of applicants that are eligible to obtain ITFS licenses.

III. In recent years, we have pursued a general policy of eliminating use restrictions in radio licenses except in circumstances where there are clear and compelling reasons for retaining them. The basis for this policy was articulated in the ***Spectrum*** Policy ***Statement*** in 2000: if market forces are allowed to operate without being restricted by government, they will tend to push the use of radio licenses to their highest valued **applications.**[267] Since then, we have applied that policy to broaden eligibility in the Cable Television Relay Service;[268] to establish eligibility for a broad variety **of** users in the 648-746 MHz band (reclaimed from broadcasters using TV channels 52-59);[269] to establish service rules for the 747-762 MHz and 777-792 MHz bands (reclaimed from broadcasters using TV channels 60-69);[270] to explore the possibility **of** introducing third generation cellular services in frequency bands previously reserved for traditional **forms** of cellular. broadband PCS, and SMR, as well as in the 1710-1755 MHz, 1755-1850 MHz, 2110-2150 MHz, 2160-2165 MHz and 2500-2690 MHz bands;[271] and to encourage the development of secondary markets in radio licenses.[272] Before adopting the ***Spectrum*** Policy ***Statement,*** the Commission applied a flexible use policy when establishing WCS. In that service, the Commission imposed no eligibility restrictions other than the foreign ownership restrictions set forth in Section 310 **of** the Communications Act.[273] **All of** those decisions have occurred since we last reaffirmed our ITFS eligibility policies in 1991.

112. While our general policy toward use restrictions has evolved since 1991, significant events specific to ITFS have occurred that warrant **our** revisiting whether an eligibility restriction continues to be necessary. Those events include the increased use of ITFS spectrum in MDS systems, and the development of alternative means of providing educational content to students. Based on those developments, we believe that it serves the public interest to consider providing both current MDS and ITFS licensees with additional flexibility.

113. Although our rules state that the primary use of ITFS is **for** educational and cultural development, they allow an ITFS licensee to lease up to ninety-five percent of its channel capacity for non-educational programming.[274] This increased use of ITFS spectrum in connection with MDS systems

---

[261] Principles for Promoting the Efficient Use of Spectrum by Encouraging the Development of Secondary Markets, 15 FCC Rcd 24,178 (2000) (Spectrum Policy Statement).

[268] Amendment **of** Eligibility Requirements in Part 78 Regarding 12 GHz Cable Television Relay Service, ***Report and Order,*** 17 FCC Rcd 9.930 (2002).

[269] **See** Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59), ***Notice of Proposed Rulemaking,*** 16 FCC Rcd 7,278 (2001).

[270] Service Rules for 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, *First* ***Report and Order,*** 15 FCC Rcd 476 (2000).

[271] Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, Including Third Generation Wireless Systems, ***Notice of Proposed Rulemaking and Order,*** 16 FCC Rcd 596 (2001).

[272] Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets, ***Notice of Proposed Rulemaking,*** 15 FCC Rcd 24,203 (2000).

[273] WCS ***R&O***, 12 FCC Rcd 10,785

[274] 47 C.F.R. § 74.931(d)(1).

through leasing arrangements enabled educational institutions to fund the construction of stations and to develop educational programming. By comparison, our rules require direct broadcast satellite (DBS) licensees to reserve four percent of their channel capacity for use by qualified programmers for noncommercial programming of an educational or informational nature.[275] Thus, while ITFS retains both its historic nomenclature and a codified statement of purpose identifying the transmission of educational programming as its primary purpose, the required amount of educational programming carried on such stations in actuality may barely exceed the minimum proportion required for DBS. We seek comments from other licensees and lessees to determine whether that degree of consolidation is typical of the industry as a whole.

114. We note currently, for example, that the public may obtain educational programming by using the Internet to receive college courses as well as obtaining the services of for-profit corporations that provide educational programming. Education is becoming more popular over the Internet because the Internet's ability to deliver media-rich content is improving rapidly. In 2002, approximately 2.2 million college students took courses over the Internet compared with 710,000 college students in 1998 – a 210% increase.[276] These students chose from over 6,000 online courses delivered by eighty-four percent of four-year colleges and universities.[277] These courses were accessible worldwide on the Internet to a rapidly expanding pool of users with sufficient connections. Already, more than twenty-eight percent of U.S. online households have broadband connections to the Internet; by one estimate, the number of broadband users experienced a nine percent average monthly growth rate between February 2000 and June 2002.[278] On the other hand, some educational institutions, especially those in rural areas and those with less economic resources, do not utilize broadband. We seek comment on what ITFS enables educators to achieve that the Internet could not. What role does educational broadcasting in other bands play? Finally, we seek comment from educators on whether commercial programming is able to fulfill some of these needs. We seek comment on whether continuing to restrict the eligibility for ITFS spectrum is in the public interest or whether maintaining educational responsibilities remains in the public interest.

115. Although we perceive that significant developments have occurred since the last examination of the ITFS eligibility restriction, retention of the restriction could be detrimental to the growth of services on the ITFS channels. The complexity of the contractual relationships that our rules require in the ITFS service may discourage investment and impair the ability of service providers to modify their operations in response to changing technology and market conditions. For example, an MMDS operator who wants to change from providing one-way, high-powered television transmission operations from a single tower to providing two-way Internet access from multiple low-powered base stations, it must gain the consent of the ITFS operators in the market, even though the MMDS operator may already have a leasing agreement with the ITFS licensee. Innovation could proceed more smoothly if commercial operators were able to aggregate spectrum in the 2500-2690 MHz band and purchase ITFS stations, which would allow them to exercise direct ownership control.

---

[275] *See* 47 C.F.R. § 100.5.

[276] Jared Bleak, ***Educated by the Market: A Researcher's Look at Educational Enfrepreneurialism*** (Harvard Graduate School of Education, Oct. 5, 2001) **http://www.gse.harvard.edu/news/features/market10052001**.html).

[277] ***Id.***

[218] ***Broadband Increases Household Penetration. Silicon Valley/San Jose Business Journal,*** Nov. 13, 2002, ***citing*** a Gartner Dataquest survey of 45,000 US. households. The article is accessible online at the following World Wide Web address: **(http://sanjose.hizjoumals.com/sanjose/stories/2M)2/11/1**/daily39.html).

116. In light of these developments, we seek comment on various options relating to the ITFS service. We emphasize that we do not contemplate reclaiming licenses from any incumbent licensees, so long as they comply with any revised technical, service or other rules that we adopt for this band. We realize that if the FCC provides existing ITFS and MDS licensees with greater flexibility, those licensees may capture the increased value given that they could not have paid for that value when they obtained their original license. Accordingly, we seek comment on whether allowing these licensees to capture such value is in the public interest on balance with having this spectrum underutilized? If not, what other approach would parties recommend the FCC implement to ensure efficient use of the MMDS and ITFS spectrum? We request comment on combining the MMDS and ITFS services into a new Broadband Radio Service with requirements similar to those that apply now to MMDS, *i.e.*, open eligibility and no educational programming requirement. Additionally, we seek comment on maintaining ITFS as a separate service requiring educational programming but modifying the eligibility requirements to allow for-profit companies to be eligible licensees. Furthermore, we invite comment on whether or not we should eliminate or otherwise change our existing ITFS instructional content origination rules. We note. for example, that one such change could be to apply to ITFS channels public interest obligations comparable to those that apply to DBS under Section 100.5 of our rules.[279] We also ask commenters to suggest alternative changes to ITFS that will result in robust services to the public?" We also seek comment on whether data services can meet the ITFS programming requirement. While we note that these educational requirements were developed in a video context, we recognize that data service, i.e., high speed internet data connections may be useful to educational institutions. Moreover, we seek comment on what kind of requirements should be required of ITFS licensees providing data services. We believe that there is a public interest benefit in promoting data services in this context particularly given that they do not consume as much spectrum as video and may be more useful than a minimal amount of video programming. Commenters may also believe that educational requirements for ITFS remains important, and that the Commission should find ways of promoting more use of the spectrum for educational purposes. We also seek comment on requiring a higher percentage of educational use for new ITFS licensees, such as twenty-five percent which was advocated by the ITFS community in the past. Finally we seek comment on other ways the Commission can strengthen the public interest in spectrum-based services for educational institutions?

117. To the extent that commercial or noncommercial MDS or ITFS operators may prefer to continue leasing channel capacity from others, we do not propose to prevent licensees from entering into new lease arrangements. ITFS licensees, to the same extent as MDS licensees, may assign their underlying license rights to commercial lessees or to others. In general, we prefer to let the markets determine the outcome of such arrangements without imposing limits, unless specific reasons justify a contrary policy. As a result, we seek comment on whether there are any circumstances under which we should restrict or require leasing in order to ensure that access to spectrum is not unduly limited.

118. We propose to relieve lTFS operators of the burden of filing copies of every channel lease agreement with the Commission. While the Commission never codified these requirements, they

[279] As noted in para. 113, supra. DBS operators must reserve four percent of their channel capacity for use by qualified programmers for noncommercial programming of an educational or informational nature. *See* 41 C.F.R. § 100.5.

[280] Presumably, licensees in the new Broadband Radio Service or ITFS licensees under the revised eligibility requirements would be eligible for *CARS* licenses, as MDS licensees currently are, but only to the extent they carry video programming—broadband data is not a permissible use for *CARS* stations.

were enunciated from time to time in various orders.[281] We propose to eliminate such requirements, with the proviso that licensees retain copies of channel lease agreements in their files and make them available to the Commission upon request. We seek comment on these proposals and the utility of retaining the ITFS eligibility restriction.

8. Other Eligibility Restrictions

119. Eligibility issues relevant to this proceeding are addressed in Sections 309(j), 257, and 613(a) of the Telecommunications Act of 1996. When granting the Commission authority in Section 309(j) of the Act to auction wireless spectrum, Congress acknowledged our authority to "[specify] eligibility and other characteristics of such licenses."[282] However, Congress specifically directed the Commission to exercise that authority so as to "promot[e] . . . economic opportunity and competition."[283] Congress also emphasized this pro-competitive policy in Section 257, where it articulated a "national policy" in favor of "vigorous economic competition" and the elimination of barriers to market entry by a new generation of telecommunications providers.[284] Section 613(a) also prohibits a cable operator from holding an MMDS license in any portion of the franchise area served by that cable operator's system.[285] The intent was to encourage entry of alternative providers of multichannel video service into markets dominated by incumbent cable systems in order to spur competition.[286] The cross-ownership restriction addressed Congress' concern that common ownership of different means of video distribution may reduce competition and limit the diversity of voices available to the public.[287] However, Section 613(a) does authorize the Commission to waive the cross-ownership prohibition in order to ensure that all

[281] *See, e.g., Part 74 Second R&O*, 101 F.C.C.2d at 91 ¶ 105 (existing operators who begin to lease out excess capacity required to submit copies of their leases to the Commission).

[282] *See* 47 U.S.C. § 309(j)(3)

[283] *Id.*

[284] *See* 47 U.S.C. § 257

[285] Section 21.912 of our rules implements Section 613 of the Act. Section 613 of the Act states that: It shall be unlawful for a cable operator to hold a license for multichannel multipoint distribution service, or to offer satellite master antenna television services separate and apart from any franchised cable service in any portion of the franchise area served by that cable operator's cable system. The Commission (1) shall waive the requirements of this paragraph for all existing multichannel multipoint distribution services . . . which are owned by a cable operator on October 5, 1992; (2) may waive the requirements of this paragraph to the extent the Commission determines is necessary to ensure that all significant portions of a franchise area are able to obtain video programming; and (3) shall not apply the requirements of this subsection to any cable operator in any franchise area in which a cable operator is subject to effective competition as determined under section 623(l) (47 U.S.C. § 533(a)). Section 613(a) was added to the Act by Section 11(a) of the 1992 Cable Act (Cable Television Consumer Protection and Competition Act 1992, Pub. L. No. 102-385, 106 Stat. 1460 (1992 Cable Act)).

[286] Implementation of Sections 11 and 13 of the Cable Television Consumer Protection and Competition Act of 1992 Horizontal Limitations and Anti-Trafficking Provisions, ***Report and Order and Furthermore Notice of Proposed Rulemaking,*** MM Docket No. 92-264, 8 FCC Rcd 6,828, 6,845 ¶ 121 (1993) ***citing*** Senate Report 102-92 (1991) at 46 ***(Cable R&O).***

[287] ***Cable R&O***, *8* FCC Rcd 6,828, 6841 ¶ 92 ***citing*** Senate Report 102-92 at 46. The Senate Committee also indicated that such cross-ownership rules were necessary to enhance competition and to further diversity, by preventing cable operators from warehousing spectrum in an attempt to preclude entry by alternative MVPD providers. ***Id.***

significant portions of the franchise area are able to obtain video programming.[288] In addition, the cross-ownership restriction shall not apply if the cable franchise operates in a geographic area that is subject to "effective competition."[289]

120. When the Cable Act was enacted in 1992, MDS operators were limited to offering television programming to paid subscribers and Congress was concerned with MDS providers' ability to compete with cable. Six years later, the Commission fundamentally changed the nature of the **MDS** service when it permitted MDS licensees to construct systems capable of providing high-speed, high-capacity broadband service. In light of the legislative history of Section 613 and the change to the MDS service, we seek comment on how this statutory restriction would apply to non-video services, such as broadband service or mobile phone service. In this regard, we note that the Act does not define "multichannel multipoint distribution service" but does define "multichannel video programming distributor" (MVPD) as "a person such as, but not limited to, a cable operator, a multichannel multipoint distribution service, a direct broadcast satellite service, or a television receive-only satellite program distributor, who makes available for purchase by subscribers or customers, multiple channels of video programming."[290]

121. Under **our** precedent, eligibility restrictions should be imposed only when (1) there is a significant likelihood of substantial competitive harm in specific markets, and, *(2)* only when eligibility restrictions are an effective way to address such harm.[291] When assessing the need to restrict the opportunity of any class of service provider to obtain spectrum for the provision of communications services, our overall goal has been to determine whether the restriction is necessary to ensure that consumers will receive communications services in a spectrum-efficient manner and at reasonable prices.[292] Consequently, we believe we should rely on competitive market forces to guide license assignment absent a compelling showing that regulatory intervention to exclude potential participants is necessary. In order to determine the competitiveness of a market, there must be an examination of market concentration in addition to other relevant market facts and circumstances. **Also** important in determining the competitiveness of a given market are the economic incentives for entry into a market,

---

[288] ***Id.*** at 6841 ¶ 93 ***citing*** 47 U.S.C. § 533(c)(2)(B)

[289] 47 U.S.C. § 533(a). ***See*** 47 U.S.C. § 543(l). Section 623(l) of the Communication's Act defines "effective competition" as: **A)** fewer than **30** percent of the households in the franchise area subscribe to the cable service of a cable system; B) the franchise area is served by a minimum of two unaffiliated multichannel video programming distributors each of which offers comparable video programming to at least fifty percent of the households in the franchise area and the number of households subscribing to programming services offered by multichannel video programming distributors other than the largest multichannel video programming distributor exceeds fifteen percent of the households in the franchise area; C) a multichannel video programming distributor operated by the franchising authority for that franchise area offers video programming to at least fifty percent of the households in that franchise area; or D) a local exchange carrier or its affiliate (or any multichannel video programming distributor using the facilities of such carrier or its affiliate) offers video programming services directly to subscribers by any means (other than direct-to-home satellite services) in the franchise area of an unaffiliated cable operator which is providing cable service in that franchise area, but only if the video programming services so offered in that area are comparable to the video programming services provided by the unaffiliated cable operator in that area.

[290] 41 U.S.C. § 522(13).

[291] ***See 39 GHz Report and Order,*** 12 FCC Rcd at 18637 ¶ 79.

[292] ***See*** 47 U.S.C. § 151

the existence of potential competitors, and the existence of barriers to entry.[293] According to the Department of Justice Merger Guidelines, a market is competitive if, in response to a price increase or quality decrease by the incumbents, "...entry would be timely, likely, and sufficient in its magnitude. character, and scope to deter or counteract the competitive effects of concern."[294]

122. Based on our preliminary analysis, we do not believe it likely in most cases that cable operators and/or DBS providers would have the incentive to acquire MDS/ITFS licenses in order to foreclose entry by a wireless MVPD provider. New MDS licensees are very unlikely to be entrants into the MVPD market for reasons discussed earlier in the *NPRM & MO&O*. This conclusion is based upon the fact that the current MDS video providers have been unable to penetrate the vast majority of markets within the United States. Overall, the service has proven to be unsuccessful and at the moment is not a viable alternative to cable and DBS. We request comment on whether opening up eligibility to cable providers would have a significant effect on concentration in video markets.

123. Although we anticipate that this spectrum will be largely used as a mobile voice and data service, the most relevant issue may be whether or not open eligibility for cable operators would have a negative impact on the broadband internet market. Industry analysts estimated that in the Fall of 2001 approximately 68% of residential broadband subscribers used cable modem service, 29% used Digital Subscriber Line (DSL) service, and about 3% used various radio-based technologies.[295] Industry analysts also estimated that in the second quarter of 2002. approximately 66% of the total cable and DSL subscribers were cable subscribers and about 34% were DSL subscribers.[296] Our own data indicate that 57% of high speed lines (connection to an end-user that is faster than 200 kbps in at least one direction) in service are cable lines, 31% are Asymmetric Digital Subscriber Line (ADSL) lines, and 11% are operated by other fringe competitors (other wireline, fiber, satellite, or fixed).[297] In addition, 36% of high-speed lines are provided by a Regional Bell Operating Company (RBOC) or other Incumbent Local Exchange Carrier (ILEC), 56% of high-speed lines are provided by cable (non-ILEC), and 7% are provided by other non-ILEC.[298] If we assume that a typical market consists of the incumbent service provider, one cable provider, and one other non-ILEC. and assume that the above numbers can be used to represent a typical market, the Herfindahl-Hirschman Index (HHI) is approximately 4500.[299] If we don't allow for an additional non-ILEC and again assuming that the national numbers of ILEC/RBOC and cable non-ILEC can be used to calculate market shares representative of a typical local broadband

[293] Rule Making to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Services and for Fixed Satellite Services, *Third Order on Reconsideration*, 13 FCC Rcd 4856, 486117, 4863¶ 12 (1998).

[294] 1992 Horizontal Merger Guidelines, U.S. Department of Justice and the Federal Trade Commission, p. 25

[295] *Declaratory Ruling*, 17 FCC Rcd at 4804

[296] http://www.cabledatacomnews.com/cmic/cmic16.html (visited Feb. 5, 2002)

[297] Figures derived from Table 1 of "High Speed Services for Internet Access: Status as of June 30, 2002," Industry Analysis and Technology Division, Wireline Competition Bureau, Dec. 2002.

[298] High Speed Services for Internet Access: Status as of June 30, 2002, Industry Analysis and Technology Division, Wireline Competition Bureau, Dec. 2002, Table 5.

[299] Note that we do not have the data necessary to explicitly delineate the relevant product and geographic markets but believe that this analysis can give us a general idea of likely concentration levels.

market, the HHI ranges between approximately 5000 and 5400. The above figures indicate that the typical broadband internet market is very highly concentrated. We request comment on this analysis and any evidence to the contrary. Commenters also should identify and discuss any regional differences and/or differences between urban and rural areas that impact such analysis.

124. We note that broadband market shares for residential and small business markets are quite different from those of medium and large size business markets. As of June 30, *2002*, national high-speed residential and small business lines consisted of 65% cable lines, 31% ADSL lines, and 3% other.[300] Business (medium and large size) lines consisted of 1% cable lines, 32% ADSL lines, 43% other wireline, 23% fiber, and 1% satellite or fixed wireless.[301] In addition, 31% of residential and small business high-speed lines are provided by a RBOC or other ILEC, 65% are provided by cable (non-ILEC), and 4% are provided by other non-ILEC on a national basis. Seventy-two percent of business (medium and large size) high-speed lines are provided by a RBOC or other ILEC, and *28%* are provided by non-ILECs. We note that cable seems to play a very insignificant role in the business market. If we assume that a typical residential (and small business) market consists of the ILEC provider, one cable provider, and one other non-ILEC, and assume that the national figures can be used to represent a typical local market, the HHI is approximately 5200. If we don't allow for an additional non-ILEC and again assuming that the national numbers of ILEC/RBOC and cable non-ILEC can be used to calculate market shares representative of a typical local broadband market, the HHI ranges between approximately 5500 and 5800. We note that the residential numbers indicate that the markets are more concentrated than the total numbers indicate. If we assume that a typical business (medium and large size) market consists of the incumbent service provider and one other non-ILEC, the HHI is approximately 6000. Markets in which the non-ILEC plays a very insignificant role are essentially monopolies and the HHI can approach 10,000. As the national market share for the non-ILEC (excluding cable) for the business market is quite a bit higher than for the residential market, we request comment as to whether there is likely to be more than one non-cable, non-ILEC provider in a typical broadband business market.

125. Although the typical broadband internet market is highly concentrated, in some circumstances there could be substantial benefits to allowing the incumbent cable or DSL operator to have more access to the MDS/ITFS spectrum. For example, in situations where expensive plant upgrades are not feasible, DSL service providers may he able to use spectrum to offer broadband internet service to customers who live in rural areas or beyond distance limitations from the central office. In addition, rural cable operators may be able to offer broadband internet service by using the spectrum to expand channel capacity (note that there are areas of the country that do not have access to DSL or cable modem service.[302] We note that Section 613(a) allows the Commission to waive the cable/MMDS cross-

[300] The market shares do not sum to one due to rounding. The data consists of information gathered from qualifying service providers who must submit FCC Form 477 on a biannual basis.

[301] The mutually exclusive types of technology are, respectively: Asymmetric digital subscriber line (ADSL) technologies. which provide speeds in one direction greater than speeds in the other direction; wireline technologies "other" than ADSL, including traditional telephone company high-speed services and symmetric DSL services that provide equivalent functionality; coaxial cable, including the typical hybrid fiber-coax (HFC) architecture of upgraded cable TV systems; optical fiber to the subscriber's premises (e.g., Fiber-to-the-Home, or FTTH); and satellite and (terrestrial) fixed wireless systems, which use radio spectrum to communicate with a radio transmitter at the subscriber's premises.

[302] For example, there are residences and businesses in Jacksonville, FL that have neither access to DSL nor cable modem service. Wireless Communications Association Bulletin, "Clearwire Launches Next-Gen ITFS Service In Jacksonville," Jan. 9,2003, p. 3.

ownership restriction to ensure that all significant portions of a franchise area are able to obtain video programming. If eligibility restrictions were to be implemented, competition in the broadband internet markets could be enhanced through the use of such a waiver.

126. Given the above analysis we request comment on whether allowing incumbent cable operators and/or DSL providers to be eligible to obtain MDS/ITFS licenses could have a negative impact in some broadband internet markets. If the incumbent cable and DSL operators believe that purchasing unlicensed spectrum at auction would have the effect of precluding current as well as future entry, they may purchase spectrum in an attempt to protect their market power. We request comment on this analysis and specific evidence, including the relevant market shares, for any local broadband internet market that may be negatively affected by allowing open eligibility to incumbent cable operators and/or DSL providers. We also request comment on the impact of an eligibility restriction on rural and underserved areas and whether eligibility waivers would be effective in allowing growth in these areas. When providing market share information, we request that commenters define the relevant geographic and product markets from which the market share information is derived. In addition, we request comment on the likelihood of future entry of wireless broadband internet service providers, assuming that they are not able to purchase the unlicensed lTFS spectrum. That is, are there substantial barriers to entry posed by the limited availability of spectrum?

127. As discussed earlier in the NPRM & MO&O, the proposed band restructuring will make mobile service a viable option in the MDS/ITFS band. Therefore, the effect of open eligibility on the mobile voice and data markets also needs to be considered. The Commission decided last year to "sunset" the CMRS spectrum aggregation limit, or "spectrum cap,"[303] effective January 1, 2003.[304] The Commission found that the cap, by setting an *a priori* limit on spectrum aggregation without looking at the particular circumstances of specific proposed transactions, was unnecessarily inflexible and could be preventing beneficial arrangements that promote efficiency without undermining competition. However, the Commission also stated that the Commission would continue to pursue the objectives of "discourag[ing] anticompetitive behavior while at the same time maintaining incentives for innovation and efficiency,"[305] but would do so by performing case-by-case reviews of proposed CMRS spectrum transactions rather than by applying a prophylactic rule.[306] And, as is most relevant here, the Commission found that "to the extent that the initial distribution of spectrum through auction is an issue in the future, that is also amenable to case-by-case review, in the sense that [the Commission] can shape the initial distribution through the service rules adopted with respect to specific auctions."[307]

---

[303] ***See*** 47 C.F.R. § 20.6.

[304] **See** 2000 Biennial Regulatory Review: Spectrum Aggregation Limits for Commercial Mobile Radio Services, WT Docket No. 01-14, ***Report and Order,*** 16 FCC Rcd 22.668 (2001) ***(Spectrum Cup Order). recon. pending.***

[305] ***Spectrum Cup Order,*** 16 FCC Rcd at 22,679 ¶ 26 n.71 ***(citing*** Implementation of Sections 3(n) and 332 of the Communications Act—Regulatory Treatment of Mobile Services, GN Docket No. 93-252, ***Third Report and Order,*** 9 FCC Rcd 7,988, 8,105 ¶ 251 (1993)).

[306] "[I]n light of the growth of both competition and consumer demand in CMRS markets, we conclude that case-by-case review, accompanied by enforcement of sanctions in cases of misconduct, is now preferable to the spectrum cap rule because it gives the Commission flexibility to reach the appropriate decision in each case, on the basis of the particular circumstances of that case." ***Spectrum Cop Order,*** 16 FCC Rcd at 22,693-94 ¶ 50.

[307] *Id.* at 22,696¶ 54.

128. Given the current state of competition in the CMRS industry, we believe that such restrictions are not necessary for the 2500-2690 MHz band. To the contrary, does opening this band to as wide a range of applicants as possible encourage entrepreneurial **efforts** to develop new technologies and services, while helping to ensure efficient use of this spectrum? Is this approach consistent with our statutory mandates? We seek comment on these questions.

129. In sum, we seek comment on whether eligibility restrictions over and above those required by statute are necessary in the 2500-2690 MHz band. We seek comment on whether opening these bands to as wide a range **of** applicants as possible would encourage entrepreneurial efforts to develop new technologies and services, while helping to ensure efficient use of this spectrum. To the extent any potential and substantial harms to competition are raised, we seek comment on whether the most effective means **for** addressing such allegations would be through a case-by-case review, taking into account all of the fact and circumstances.

E. Technical Issues

130. In the preceding section, we addressed band plan reconfigurations, geographic area licensing and eligibility issues. In this section, we address technical proposals to enhance the service. We ask **for** comments on these issues as well as suggestions concerning other technical rule changes that may be of benefit to **the** Services.

1. Signal Strength Limits at Geographic Service Area Boundaries

131. We seek comment on the signal strength limits to apply at geographic area boundaries. Last year, for example, we reallocated forty-eight megahertz in the lower 700 MHz band (broadcast television channels 52-59) to fixed and mobile services while allowing continued provision of broadcast services in the band on a secondary basis, and limited the permissible signal strength at service area boundaries to 40 dBμV/m, the same signal strength limit that we had adopted earlier for the upper 700 MHz band and the 800-MHz EA-based and 900-MHz MTA-based **SMR services.**[308] By comparison, our rules apply a somewhat higher 47 dBμV/m limit at the geographic service area boundaries for broadband **PCS,**[309] for Part 27 services in the 2305-2320 and 2345-2360 MHz bands, and **for** Part 27 services in the 1390-1395 and 1432-1435 MHz bands."[310] In all of those cases, the allowed signal strengths are compatible with the provision **of** low-powered cellular services in adjacent service areas. We are tentatively inclined to follow the same general standard in this proceeding but seek comments on any unique characteristics of the 2500-2690 MHz band that might warrant a different approach.

2. Authorization **of** Mobile Operation

132. Although we have applied a mobile allocation to the 2500-2690 MHz band, until now we have required MDS and ITFS licensees to obtain separate authorizations before commencing mobile service. We propose to authorize MDS and **ITFS** licensees to engage in mobile operation by blanket-licensing such operation under those licensees' geographic service area authorizations. We seek comment on the advisability of such blanket licenses and any requirements they should contain, Including but not limited to those discussed above and below.

---

[308] **See *Lower 700 MHz Band R&O*,** 17 FCC Rcd at 1.070¶ 119. This limit **is** codified at 47 C.F.R. § 27.55(a)(2)

[309] 41 C.F.R. § 24.236.

[310] 47 C.F.R. § 27.55(a)(1) and (3).

3. Power and Antenna Height Limits

133. ***Response Stations.*** Under our current rules, we limit response stations to a transmitter output power of 2 watts.'" This is the same requirement that we have for broadband PCS mobile/portable operation in the 1.9 GHz band.'" However, the Coalition notes that we adopted the 2-watt limit in the ***Two-Way Order*** without any explanation and urges that we delete this power limit."' It says that the limit unduly restricts the flexibility of equipment designers to make the most efficient use of the 2.1 and 2.5 GHz bands. The Coalition emphasizes, however, that it is not advocating any change in the restrictions on power contained in Parts 1 and **2** that are designed to assure the protection of human health and safety; in fact, it recommends that we clarify that those limits apply to MDS and ITFS by adding those services to the list of services specifically shown as being subject to the rules.[314]

134. While the 2-watt limit on PCS response stations seemed like a reasonable model to follow when we adopted a similar rule for MDS and ITFS, the record of the PCS proceeding indicates that the 2-watt limit was originally designed to reduce the likelihood of interference with fixed microwave stations in the PCS bands.[315] We seek comment on the extent to which similar concerns should apply for **MDS** and ITFS, bearing in mind the differences between the incumbent licensees in the MDS/ITFS bands - and their circumstances - as compared with the incumbent licensees in the PCS band. While compliance with our safety rules may by itself necessitate compliance with a 2-watt limit for devices that are normally held close to the user's body, those rules allow higher power levels in circumstances where the response station's transmission antenna is designed to be used at least twenty centimeters away from the body of the user or any nearby persons.[316]

135. Finally, we seek comment on whether we should establish a maximum antenna height for response stations in view of our proposal to blanket-license such stations. While mobile or portable stations would typically be close enough to the ground that they would he shielded by nearby structures. the rules that we contemplate adopting **for** these services would also permit the deployment of response stations at fixed locations, where they could be attached to antennas at high elevations. Such transmitters would have a greater potential for generating unwanted electrical interference. We seek comment on whether or not the signal strength limits that we propose to apply at geographic service area boundaries would obviate the need for antenna height limits.

---

[311] **See** 47 C.F.R. §§ 21.909(g)(2) and 74.939(g)(2).

[312] **See** 47 C.F.R. § 24.232.

[313] Coalition Proposal at 25

[314] ***Id.*** at 26.

[315] Amendment of the Commission's Rules to Establish New Personal Communications Services, ***Second Reporr and Order. 8*** FCC Rcd 7,700, 7,764-7,765 ¶ 156 (1993).

[316] At frequencies above **1.5** GHz, mobile devices whose effective radiated power (ERP) is less than 3 watts are not required to undergo even routine environmental evaluation for radio frequency exposure prior to equipment authorization **or** use. 47 C.F.R. § 2.1091. **A** mobile device is defined for this purpose as "a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby person." ***Id.*** Units designed to be used within twenty centimeters of a person are defined as "portable devices" and are subject to more stringent requirements. 47 C.F.R. § 2.1093.

136. ***Base/Main Stations.*** We note that there is no specific power limit specified for low power base stations nor are there base station transmitting antenna height limits for operating in this band. In view of our proposals above to limit power at other licensees' border areas, we ask for comment on whether there would be any benefit to establishing base station power and antenna height limits.

137. In particular, we seek comment upon a Coalition proposal to create incentives, but not an absolute requirement, for licensees to limit the height of low power base stations near their GSA borders."[317] The Coalition expresses concern that a 47 dBμV/m signal strength limit at GSA boundaries might not provide sufficient protection against interference to base station receivers. The scenario that causes them the most concern would arise when the interfering licensee is using a channel for downstream communications from its base stations, and the interfered-with licensee in a contiguous GSA is using the same channel for upstream communications to its base stations. Under these circumstances, the Coalition would have us apply a safe-harbor requirement that both licensees limit their antenna heights to $D^2/17$, where D is the distance in kilometers between the base station causing the interference and the point where a line connecting the transmitting base station with the neighboring receiving base station intersects the boundary between their respective GSAs. Antenna height for this purpose would be defined as the height in meters of the antenna's centerline above the average elevation along the line between the two base stations.[318] If a transmitting licensee's antenna is not within the safe-harbor height limit and the receiving licensee's antenna is within the safe harbor, the transmitting operator would be required to take such measures as are necessary to limit the level of the undesired signal at the receiving base station to -107 dBm or less.[319]

138. By comparison with the Coalition's recommendations, our Broadband PCS rules do not impose any direct limit on antenna heights, but they apply a graduated reduction in permissible e.i.r.p. output for base station antennas that are more than 300 meters in height."[320] On first impression, the Coalition's proposal appears to lack certainty, insofar as the requirements imposed upon a licensee would be dependent upon actions taken by a neighboring licensee. However, a licensee could ensure its compliance with the recommended safe harbor, regardless of any future actions taken by the neighboring licensee, by drawing a line intersecting the nearest point on the GSA boundary and assuming that the other licensee might someday site a base station somewhere on that line. The recommended formula could then be applied to determine the maximum safe-harbor height for any given distance from the boundary. The safe harbor distance formula proposed by the Coalition does not adversely affect the typical 2-5 mile antenna service distance and 150 to 300' height above average terrain (HAAT) of base stations in low- power cellular networks. Although it seems to have a minimal effect on typical base station design, it is unclear how the coalition arrived at the formula itself. Is the formula really necessary? Is the formula "technology agnostic"?

139. In addition, given our licensing approach discussed herein, we seek comment on whether there is a need to reduce the maximum power permitted for high-powered video operations.[321] Finally, we request comment on the Coalition's proposal to eliminate the limitation pertaining to the use of digital

[317] See Second Supplement to the Coalition Proposal at 3-7, tiled Feb. 7,2003

[318] *Id.* at 5.

[319] *Id.* at 6.

[320] 47 C.F.R. § 24.232(a).

[321] See 47 C.F.R. § 74.935.

modulations with non-uniform spectral densities, i.e., the uneven or random distribution of energy throughout the specified spectrum.[322]

4. Emission Limits

140. The purpose of emission limits. also known as emission masks, is to provide protection against adjacent channel interference (*e.g.*, restrict transmitter emissions on a range of frequencies removed from the licensee's assigned frequency or frequency band). The current rules governing emission limits for MDS and ITFS are set forth in Section 21.905 and 74.936, respectively. The current rules are based, however, on high power video operation and vary slightly between the services. As discussed herein, MDS licenses have indicated an interest to use this band for low power two-way operations. Further, we are proposing rules for mobile operation in this band. Consequently, we believe that modification of the rules governing out-of-band emissions may be necessary.

141. The Coalition recommends that we require equipment on the LBS and UBS channels (both base stations and stations at a customer's premise) to attenuate the power below the transmitter power (P) by at least $43 + 10 \log_{10}(P)$ dB on any frequency outside a licensee's authorized spectrum.[323] This recommendation is the same as the general emission mask the Commission adopted for operations in both the upper and lower 700 MHz band."[324] For the R channels the Coalition suggests requiring an attenuation of at least $80 + 10\log_{10}(P)$ dB. The Coalition also asserts that additional attenuation may be required in special circumstances. For example, the Coalition states that the rules be changed to require a licensee to take steps to attenuate out-of-band emissions by at least $67 + 10 \log_{10}(P)$ dB upon written request from an adjacent channel licensee.[325] Requiring a licensee to reduce its out-of-band emissions at the request of an adjacent channel licensee, however, is not something we have done in the past. The Coalition also outlines a more restrictive mask for protecting operations on the MBS channels[326] and for licensees of MBS channels to protect operations on LBS and UBS channels.[327] Our initial observation here is that adopting all the Coalition's recommendations would be inconsistent with our attempt herein

[322] *See* Coalition Proposal at 25 n.70.

[323] Coalition Proposal at 29.

[324] *Lower 700 MHz Band R&O*, 17 FCC Rcd at 1,070¶ 122.

[325] According to the Coalition's Proposal, the written request must include a certification from the requesting licensee that it intends to initiate service on the affected adjacent channel group at a date certain (not more than one year after the date of the written request), and that the additional attenuation is required due to the respective technical characteristics of the requesting licensee's planned facilities and those of the party receiving the request. The requesting licensee must also include in the written request currently available information regarding its planned network design comparable in scope to the information required to be filed upon completion of the construction of its facilities. *See* Coalition Proposal at 29.

[326] The Coalition states "[i]n addition to the other requirements imposed on out-of-band emissions by stations operating outside the MBS. the licensee of any transmitter operating in the LBS, UBS, I, I, or K channels shall manage its out-of-band emissions such that the noisepower introduced into an MBS channel does not exceed an EIRP of -37 dBm without the consent of the affected MBS channel licensee. Notwithstanding the foregoing, if the licensee of a channel outside the MBS digitizes a channel within the MBS, the noise power introduced into that channel of the MBS shall not exceed an EIRP of -20 dBm without the consent of the affected MBS channel licensee." *See* Coalition Proposal at 30.

[327] See Coalition Proposal at 16, nn.39.41.

to simplify the rules governing this band (*e.g.*, minimize harmful interference without establishing overly burdensome requirements). Nevertheless, we seek comment on whether we should adopt the Coalition's recommendations concerning out-of-band emissions or different criteria and details on measurement procedures to determine compliance.[328] Further, we seek comment on the appropriate emission mask for mobile operations. In that regard, we note that we recently adopted out of band emission requirements to ancillary terrestrial component (ATC) mobile units in the 2000-2020 MHz band in order to protect adjacent channel PCS operations.'" Since Mobile Satellite Service **(MSS)** and ATC units will be operating in the band immediately below 2500 MHz, we seek comment on whether similar limits should apply. We also seek comment on whether any special rules are needed to protect the Earth Exploration Satellite (passive), Radio Astronomy, and Space Research allocations in the 2690-2700 MHz band.'" Finally, we request comment on whether we should specify a frequency tolerance or require equipment to maintain its operations fully within the emission mask at all times.

5. Technology

142. The Coalition states that we should not restrict operation in this band to a particular technology or technologies and our rules should remain technology-neutral to the maximum extent possible."' However, it does mention second-generation equipment employing two different technologies – FDD and TDD. The Coalition notes that FDD technology requires a separation between the highest frequency used in one direction and the lowest frequency used in the other direction.[332] To allow for FDD technology, the Coalition proposes that when this technology is employed by a licensee, the LBS be restricted to subscriber-to-base (upstream) communications and the UBS be restricted to base-to-subscriber (downstream communications)."' According to the Coalition, this framework will simplify adjacent channel coordination and provide the vendor community with a degree of certainty as to the band usage that will translate into lower equipment costs and smaller equipment. We seek comment on whether we should specify upstream and downstream channels in the rules should licensees use FDD or a similar technology. We also ask for comment on whether we should establish formal channel pairings to standardize the separation between channels used in upstream and downstream equipment.[334] In addition, we ask for comment on what role software defined radio technology can play

---

[328] For example, the Coalition suggests that we measure out-of-band emissions at the outermost edges of the combined channels where two or more contiguous channels are employed in the same system. ***See*** Coalition Proposal at **29** n.79. ***See also*** Coalition Proposal at **30** n.81.

[329] Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Bands, IB Docket No. 01-185, ***Report and Order and Notice of Proposed Rulemaking,*** FCC 03-15 (rel. Feb. 10,2003)at ¶ 119.

[330] ***See*** 47 C.F.R. § 2.106 n.US246.

[331] Coalition Proposal at 11 and 15

[332] The Coalition points out that the Commission's ***Interim Report*** stated that a separation of at least ***30*** megahertz between upstream (customer to base) and downstream (base to customer) transmissions is needed to provide sufficient isolation of signals in the duplexer. ***See*** Coalition Proposal at 16. ***See also Interim Report*** at 54.

[333] Coalition Proposal at 16.

[334] In raising these questions, we recognize that the Coalition Proposal does not provide for formal pairings of channels but that, as the Coalition notes, operators could choose to pair channel groups that are sufficiently separated to allow upstream and downstream FDD communications. ***See*** Coalition Proposal at 15, n.40.

here in resolving potential problems. Finally, we ask for comment on whether the Commission should adopt standards for mobile operation to promote interoperability and roaming.

6. Unlicensed "Underlay" Operation

143. As noted previously, one of the underlying goals of this proceeding is to promote increased access to spectrum. In this regard, we note that Intel and Microsoft advocate that we create or at least preserve the opportunity to create unlicensed "underlay" rights for very low-powered devices **on** these channels.[335] Recently, we issued a Notice *of Inquiry* concerning making additional spectrum available for use by unlicensed devices in the television bands and in the 3650-3700 MHz band.[336] In the Unlicensed *NOI*, we noted that there have been significant advances in technology that that may make it feasible to design new types of unlicensed equipment that would not cause interference to existing services.[331] For example, equipment could be designed that could monitor spectrum before transmitting to avoid interference, or equipment could be designed that could use the Global Positioning System to know where it is located and determine whether there are licensed operators in the area.[338] We also noted that allowing unlicensed operation with minimal technical requirements could potentially permit the development of new and innovative types of devices, such as new wireless data networks.[339]

144. The proximity of the 2500-2690 MHz band to successful unlicensed technologies in the 2.4 GHz band, and our goal of increasing the intensiveness and efficiency of use of the 2500-2655 MHz band, suggests that it **may** be appropriate to consider enhancing unlicensed use in the that band on a secondary, non-interference basis.[340] While we recognize that unlicensed operations under our Part 15 rules are subject to the condition that the transmitter does not cause interference to authorized services, we nonetheless are mindful in this context that additional measures may be necessary to ensure that unlicensed operations do not cause interference to existing, licensed operations. In that regard, we note that WCA believes that Microsoft's and Intel's proposal is premature. WCA contends that the necessary technology for mass producing affordable devices capable of measuring and reliably adapting to the presence of background noise or "interference temperature" has not been demonstrated."[341]

145. **As** we observed in the Unlicensed *NOI,* allowing unlicensed devices to operate on spectrum that is not being utilized in a particular area would be a more efficient use of spectrum.[342] We seek comment on possible revisions to our rules to enhance unlicensed operations in the 2500-2690 MHz band. Are equipment economies possible between the **2.4** GHz band and the 2.5 GHz band for

---

[335] Intel Reply Comments in RM-10586, at 5; Microsoft Reply Comments in RM-10586. at 3-4.

[336] Additional **Spectrum** for Unlicensed Devices Below 900 MHz and in the 3 GHz Band, ET Docket No. 02-380, Notice *of Inquiry*, 17 FCC Rcd 25,632, (2002) ("Unlicensed*NOI*")

[337] Id. ¶ 13.

[338] *Id.*

[339] *Id.* ¶ **21**

[340] We also seek comment on a proposal to allow unlicensed operation on a primary basis for unassigned ITFS spectrum. See *paras.* 79-82, *supra.*

[341] **WCA** Comments in ET Docket No. 02-135, at 10.

[342] Unlicensed *NOI*, ¶ 14.

unlicensed operators? What Part 15 rules would need to be changed in order to allow enhanced unlicensed operation? Could we permit power levels greater than 1 watt for such operations without causing harmful interference to authorized MDS and ITFS users? If so, we seek comment on the maximum permissible power level. Would any restrictions on antenna gain or directivity be necessary? What other requirements would be necessary to protect existing MDS and ITFS users? Is unlicensed use appropriate for any of the band plans we mentioned earlier?[343] If we create high-power and low-power sections of the hand, should we permit unlicensed use in one section of the band but not the other?

146. We seek comment on the extent to which underlay rights would have practical utility if they were made available on a less-than-nationwide basis. Is it feasible to manufacture affordable transceivers that are capable of using underlay rights where and only where such access is offered, if some but not all licensees on a given channel allow underlay access? If not, what kinds of institutional frameworks could facilitate national aggregation and sale of underlay rights? If a licensee or a group of licensees were willing to sell such rights, what kinds of entities would be likely purchasers? To make such transactions feasible, would it be necessary for the Commission to issue separate licenses for underlay rights, or would it suffice for the primary licensees to commit themselves contractually to refrain from seeking enforcement of interference protection from underlay users? If companies like Intel or Microsoft were willing to consider paying licensees to allow underlay operation on their channels, would the vendors seek to restrict underlay operation to their own customers, or would it suffice, from their perspective, if licensees were to allow underlay operation by anyone on their channels?

147. In addition, we note that Part 15 transmitters may not operate in certain restricted bands, including 2655-2690 MHz.[344] Are there any circumstances under which unlicensed operation could be allowed in the 2655-2690 MHz band without adversely affecting passive sensing operations in the 2655-2700 MHz band?

148. We also seek comment on what rules might provide incentives for licensees to offer access to devices operating above Part 15 power limits either through secondary markets or an "easment" basis. Although our first choice is that licensees make available these rights via commercial transactions, we recognize that in many cases transaction costs may be too high to enable efficient transactions, and that in some cases licensees may refrain from entering into such transactions to preclude potential competitors. We seek comment on whether high transaction costs or anti-competitive motivations will hinder such transactions.

7. RF Safety

149. The Coalition states that to implement its proposed approach, we should amend our RF emissions rules. More specifically, the Coalition contends that we should amend Sections 1.1307(b)(2), 2.1091(c) and 2.1093(c)[345] to include MDS and ITFS services.[346] The Commission considers RF safety

[343] *See paras. 79-82, supra.*

[344] 47 C.F.R. § 15.205.

[345] See 47 C.F.R. §§ 1.1307(b)(2), 2.1091(c) and 2.1093(c)

[346] *See* Coalition Proposal at 20, n.51 and *26.*

procedures to be essential in protecting human beings from excessive exposure to RF energy.'" Accordingly, we seek comment on whether and how we should amend the RF safety rules.

8. North American Datum (NAD) 83 Coordinate Data

150. The Coalition notes that our rules require the submission of different coordinate data for licensing actions. Applicants submit coordinate data in NAD83 for applications filed on FCC Form 331 but in NAD27 for all other MDS/ITFS forms. The Coalition asks that we require applicants to use NAD83 coordinate data and update or convert the current database.[348] As stated above, we propose to process applications using the ULS. We require NAD83 coordinate data for applications filed under ULS. Accordingly, we propose to require all licensees to file coordinate data using NAD83 and propose to convert existing data to NAD83. We seek comment on these proposals.[349]

9. MDS Response Station Hubs

151. Our existing rules treat hubs like main stations for application processing purposes. For instance, whereas 47 C.F.R. Section 1.1104 contains a special section on the application fee for signal booster applications and for signal booster certification of completion of construction applications ($70.00 in each instance), the rules do not differentiate between requirements for main station applications and certifications and response station hub applications and certifications. At present, the fee for a response station hub on a Form 331 is $210.00, and the fee for the Form 304A is $610.00.[350] Section 21.909 states that an MDS response station hub application must be filed on a Form 331. Licensees of MDS response station hubs must also file a certification of completion of construction application.[351] Response station hubs, signal booster stations and R channels are considered stand-alone stations, and thus have unique facility ID numbers separate from the associated main stations.[352] However, at this time, only signal booster stations are designated for special treatment in the application fee schedule. We do not believe that certifications of completion of construction of two-way hubs will be necessary under the GSA licensing approach that we propose, and therefore propose to eliminate such filing requirements.

10. 2150-2162 MHz band

152. In the ***Third Report and Order,*** the Commission addressed relocation issues for the MDS channels in the 2150-2162 band. We stated that MDS incumbents would be entitled to comparable facilities and/or adequate replacement spectrum. The Commission noted that "our relocation policies do

---

[347] The existing requirements are located in 47 C.F.R. §§ 1.1307(b), 1.1310, 2.1091 and 2.1093

[348] Coalition Proposal at 56

[349] "With regard to the Coalition's request to convert the database, we note that the Wireless Bureau has asked MDS and ITFS licensees to review their license data, including coordinate data, to determine if it is correct. ***See*** Wireless Telecommunications Bureau Seeks to Verify ITFS, MDS and MMDS License Status and Pending Applications, ***Public Notice,*** DA 02-2751, released Oct. 18, 2002.

[350] ***See*** 47 C.F.R. §§ 1.1104 and 21.909(c)(1).

[351] 47 C.F.R. § 21.909(h)(i)(2).

[352] See ***Public Notice,*** Mass Media Bureau Multipoint Distribution Service and Instructional Television Fixed Service Applications Tendered For Filing, Report No. 148, (Nov. 29, 2000).

not dictate that systems be relocated to the same amount of spectrum as they currently use. only that comparable facilities be provided."[353] We further concluded that "[g]iven advances in technology, *e.g.*, changing from analog to digital modulation and the flexibility provided by our existing relocation procedures to make incumbents' whole, we believe that current MDS operations could be accommodated using substantially less spectrum than that of the existing 2150-2160/62 MHz allocation." We then sought comment on how much spectrum was necessary for MDS relocation. The Commission further noted "under our relocation policies only stations with primary status are entitled to relocation."[354]

153. In light of the fact that we do not yet know where MDS licensees operating on Channels 1 and 2 (or 2A) will be relocated, we will not propose changes to service rules for those channels at this time. Depending on the relocated spectrum that MDS licensees receive, additional technical rules may be necessary to accommodate the technical characteristics of that spectrum. Once relocation spectrum for these MDS licensees has been identified, we will issue a further notice of proposed rulemaking in this proceeding seeking comment on service rules for relocated licensees.

11. Radiation from Stations that are Not Engaged in Communications

154. On September 25, 1998, the Commission amended its rules to allow MDS and ITFS licensees to provide a wide range of high-speed, two-way services to a variety of users.[355] On July 29. 1999, the Commission made some additional rule modifications to facilitate the provision of these services.[356] On December 22, 1999, IPWireless, Inc. (IPWireless) requested reconsideration of the Commission's out-of-band emission limitations.[357] On February 10,2000, the group of over 100 wireless communications system operators, Commission licensees, equipment manufacturers and consultants who were parties to the Petition for Rulemaking that commenced the ***Two-way Proceeding*** (collectively, Petitioners) did not oppose IPWireless' petition, but sought clarification of Sections 21.909(m) and 74.939(o) of our Rules.[358] The Petitioners indicated that there was some uncertainty within the industry

---

[353] ***See*** Amendment of Part 2 of the Commission'sRules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems, ***Third Report and Order, Third Notice of Proposed Rulemaking, and Second Memorandum Opinion and Order,*** ET Docket No. 00-258, FCC 03-16, ¶72 (2003) ***(AWS Third R&O, Third NPRM, and Second MO&O)***.

[354] In 1992, when the 2160-2165 MHz band was reallocated to emerging technologies, the Commission implemented a policy by which incumbent MDS licensees that were using the 2160-2162 MHz band would continue such use on a primary basis. ***See*** Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, ***First Report and Order and Third Notice of Proposed Rule Making,*** 7 FCC Rcd 6886, 6889 ¶17 (1992). However, any MDS station that applied for use of this band after January 16, 1992 would be granted only on a secondary basis to emerging technology use. ***Id. at*** n.22.

[355] ***Two-way R&O***, 13 FCC Rcd 19,112.

[356] Amendment of Parts 1, 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-way Transmissions, ***Report and Order on Reconsideration,*** 14 FCC Rcd 12,761(1999) ***(Two-way R&O on Recon).***

[357] IPWireless, Inc. Petition for Reconsideration, filed Dec. 22, 1999.

[358] Petitioners Consolidated Comments and Partial Opposition at 5 (Consolidated Comments) filed Feb. 10, 2000. Although the Commission inadvertently indicated that WCA requested clarification, we take this opportunity to correct the record to reflect that the Petitioners requested clarification of this issue. ***See*** Amendment of Parts 1. 21 and 14 *to* Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage (continued....)

as to the meaning of the language, "Radiation of an unmodulated carrier and other unnecessary transmissions are forbidden."[359]

155. The Petitioners requested clarification that this language requires a response station's transmitter to be biased off so that no RF Gaussian noise is emitted when the station is not engaged in communications.[360] The Petitioners argued that this interpretation assures the protection of the noise floor of adjacent channel and adjacent market licensees against unnecessary emissions from transceivers.[361] On May 11, 2000, the Petitioners and IPWireless notified the Commission that it had reached a compromise concerning the appropriate level of emissions that a response station may generate when not directly engaged in communications with a response hub.[362]

156. The Petitioners and IPWireless requested amendment of Sections 21.909(m) and 74.939(o) of our Rules to provide that when a response station is not in communications with its associated hub, it must restrict its field strength.[363] First, they proposed to set the permissible level of RF Gaussian noise at 10 microvolts/meter per 1 MHz bandwidth at a distance of 3 meters for response stations utilizing antennas with 6 dB or less gain over isotropic. Second, they proposed to set the permissible level of RF Gaussian noise at 10 microvolts/meter x 10exp[(antenna gain - 6 dB) / 20] per 1 MHz bandwidth at a distance of 3 meters for stations utilizing antennas with more than 6 dB gain over isotropic.[364]

157. We note that the Commission agreed to clarify this issue and sought comment[365] on specific issues relating to this matter.[366] In this *NPRM & MO&O*, we are seeking comments on comprehensive changes to the interference rules that would apply in these services. In light of that fact. we seek further comment on whether the rules changes suggested by the Petitioners are still necessary or appropriate. We note that other services do not have a similar requirement. We ask commenters who support imposition of such a requirement to explain the need for such a requirement in light of other changes we are proposing to our technical rules.

158. In a related matter, we also seek comment on requiring that subscriber handsets not transmit unless a base station pilot is present. Such a rule could be necessary in order to avoid interference to existing operations.

(Continued from previous page)
in Fixed Two-way Transmissions, ***Report and Order on Further Reconsideration and Further Notice of Proposed Rulemaking***, 15 FCC Rcd 14,566, 14,576 (2000) ***(Two-way FNPRM)***.

[359] Petitioners Consolidated Comments at 6

[360] ***Id***

[362] Petitioners and IPWireless, ***Ex Parte,*** filed May 11.2000.

[363] ***Id.*** at 1

[364] ***Id.***

[365] ***Two-way FNPRM,*** 15 FCC Rcd **at** 14.576

[366] ***Two-way FNPRM,*** 15 FCC Rcd 14,576-7 ¶¶ 39-40.

F. standardization of Practices and Procedures

1. Consolidation of Procedural Rules in Part 1

159. With the adoption of the *ULS R&O*, the Commission consolidated the majority of its wireless services procedural rules into Part 1.[367] By consolidating the procedural rules in Part I, the Commission improved the consistency of its rules across wireless services and provided a single point of reference for applicants, licensees, and the members of the public seeking information regarding our licensing procedures.[368] Additionally, the consolidation reduced confusion among applicants and licensees, accelerated the application process, and improved the speed with which wireless carriers were able to provide service to the public.[369] We believe that consolidating the MDS and ITFS procedural rules into one rule part will decrease confusion concerning the application of our MDS and ITFS rules. Because we believe that consolidation will benefit applicants, licensees and members of the public, we propose to consolidate the MDS and ITFS procedural rules into Part 1. We invite comment on this proposal.

2. Consolidation of Service Specific Rules in Part 101

160. Currently, three rules parts - Parts 21, 73 and 74 – contain our MDS and ITFS service specific rules. Part 21 contains our MDS rules while Parts 73 and 74 contain our ITFS rules. Although MDS and ITFS licensees use their licenses to provide similar services, our rules treat these licensees differently. We believe that regulatory parity will lead to efficiency in this band and spur the development of new and improved services for the public. Additionally, we believe that consolidating the MDS and ITFS service specific rules into one rule part will reduce confusion and provide a single reference point for these similar services. Because we believe that consolidation will benefit applicants, licensees and members of the public, we propose to consolidate the MDS and ITFS service specific rules into Part 101. We also seek comment on alternative means of consolidating the rules relating to these services, such as incorporating the rules into Parts 21 or 27 of our Rules.

3. Standardization of Major and Minor Filing Requirements

161. The license modification rules for MDS and ITFS are spread across seven rules. MDS licensees submit FCC Forms 304 or 331 to modify their licenses pursuant to Sections 21.40 and 21.41 of our Rules.[370] For a "major modification" to an MDS station, the Commission will not grant the modification unless it finds that the modification is in the public interest and in compliance with Communications Act.[371] A major modification to an MDS license would also include an amendment that

---

[367] Biennial Regulatory Review – Amendment of Parts 0, 1, 13, 22, 24, 26, 27, 80, 87, 90, 95, 97, and 101 of the Commission's Rules to Facilitate the Development and Use of the Universal Licensing System in the Wireless Telecommunications Services, *Report and Order*, 13 FCC Rcd 21,027, 21,054 ¶ 56 (*ULS R&O*).

[368] *Id.*

[369] *Id*

[370] 47 C.F.R. §§ 21.40, 21.41.

[371] *See* 47 C.F.R. § 21.40. A major modification for an MDS license includes a substantial modification of the engineering proposal such as (but not limited to) a change in, or addition of, a radio frequency channel; a change in polarization of the transmitted signal; a change in type of transmitter emission or an increase in emission bandwidth of more than ten percent; a change in the geographic coordinates of a station's transmitting antenna of more than ten seconds of latitude or longitude or both; any change which increases the antenna height by three meters or (continued....)

would require submission of an environmental assessment, would result in a substantial and material alteration of the proposed service, specifies a substantial change in beneficial ownership or control, or is deemed substantial by the Commission pursuant to section 309 of the Communication Act.[372]

162. Our existing rules require an **ITFS** licensee to file a formal application on FCC Form 330 for any of the following kinds of changes or modifications to its transmission system: adding a new channel; changing channels; changing polarization; increasing the **EIRP** in any direction by more than 1.5 dB; increasing the transmitting height by twenty-five feet or more; or relocating a facility's transmitter site by ten miles or more.'" Our rules further provide that applications for "major changes" to existing ITFS facilities that are mutually exclusive with other such applications or with applications for new stations are subject to competitive bidding.[374] ITFS minor modification applications may continue to be filed at any time and are not be subject to competitive bidding.'" Our rules also permit certain parties, subject to Commission approval, to modify involuntarily the facilities of an existing ITFS licensee in certain situations.[376]

163. We have adopted one set of modification rules for the services that we license using the ULS.[377] This consolidation of modification rules has led to efficient processing of modification applications in ULS. We treat all major modifications as new applications in ULS.[378] Licensees may make minor modifications as a matter of right without prior Commission approval (other than pro forma assignments and transfers) within thirty days of implementing such changes.'" Where other rule parts permit licensees to make permissive changes to technical parameters without notifying the Commission (e.g., adding, modifying, or deleting internal sites), no notification is required.'" Although there are similarities between our current **MDS** and ITFS license modification rules, we believe that there are substantial benefits to employing the simplified approach we use in ULS to the **MDS** and **ITFS** licenses. We believe that using our Part **1 ULS** modification rules will reduce confusion with regards to the appropriate rules to use, increase the speed with which the Commission staff processes applications and will eliminate redundancy in our rules. Accordingly, we propose to use our Part 1 modification **rules** to

(Continued from previous page)
more; any technical change that would increase the effective radiated power in any direction by more than 1.5dB; **or** any changes or combination of changes that would cause harmful electrical interference to an authorized facility or result in a mutually exclusive conflict with another pending application. 47 C.F.R. § 21.23.

[372] ***Id.***

[373] 47 C.F.R. § 14.951

[374] 47 C.F.R. § 73.5000. We note that our rules permit ITFS licensees to exchange channels evenly with each other or with MDS licensees after filing pro forma applications. 47 C.F.R. § 74.902(f).

[375] Implementation of Section 309(j) of the Communications Act – Competitive Bidding for Commercial Broadcast and Instructional Television Fixed Service Licenses, ***First Report and Order,*** 13 FCC Rcd 15.920¶ 207 (1998).

[376] ***See*** 47 C.F.R. § 74.986.

[377] **See** 47 C.F.R. § 1.929.

[378] ***See*** 47 C.F.R. § 1.947.

[379] **See** 47 C.F.R. § 1.929.

[380] ***See*** 47 C.F.R. § 1.947(b)

determine major and minor modifications for MDS and ITFS licenses. We seek comment on this proposal.

4. Amendments to New and Modification Applications

164. The MDS *community* apparently did not raise any objections to the procedural rules regarding the filing of amendments in the Services in response to the Coalitions proposals. However, our consolidated approach to amendments for wireless applications[381] differs in some respects with our approach to amendments for MDS/ITFS applications.[382] We must reconcile these differences. For instance, we must address the treatment of major amendments, and amendments regarding ownership and auction services. MDS operators have recommended that we revise our MDS/ITFS rules to use the same definitions for major and minor amendments as for major and minor modifications."[383] We invite comment on whether to adopt the consolidated wireless procedures for amendments to applications. Furthermore, ITFS applicants may amend applications to cure defects noted in deficiency letters to the applicant. MDS BTA applicants may amend **a** long-form application up to the date the application has appeared on public notice as accepted for filing or by written petition demonstrating good cause if the application is already on public notice.

5. Assignments of Authorization and Transfers of Control

165. MDS licensees use FCC Form 305 to apply for voluntary assignments; involuntary assignments; and pro forma assignments and FCC Form 306 to apply for voluntary transfers of control,

---

[381] Our rules treat certain amendments as new applications that receive a new filing date **as** of the date the applicant submits the amendment. Amendments that we treat as new applications include applications submitted up to fourteen days after the application appeared as accepted on public notice and that reflects any change in the technical specificationsof the proposed facility; submitted with a new or modified analysis of potential interference to another facility; or submitted with an interference consent statement from a neighboring licensee. 47 C.F.R. § 21.23. **In** such cases, the amended application must include an applicant certification that it has met all requirements regarding interference protection to existing and prior proposed facilities, and that it has obtained any necessary consent letters in lieu **of** interference protection. The applicant must also certify that it has served all potentially affected parties with copies of its amended application and engineering materials, and that the engineering analyses comply with the rules and methodology. ***See*** 47 C.F.R. §§ 21.23, 73.3522(a). Furthermore, ITFS applicants may amend applications to cure defects noted in deficiency letters to the applicant. ***See*** 47 C.F.R. § 73.3522(a). **MDS BTA** applicants may amend a long-form application up to the date the application has appeared on public notice as accepted for filing or by written petition demonstrating good cause if the application is already on public notice. ***See*** 47 C.F.R. § 21.926. In both Services, applicants may not amend applications if the proposed amendment seeks more than **a** pro forma change of ownership or control.

[382] Generally, under our consolidated approach for processing wireless applications, applicants may tile amendments to pending applications as a matter of right if we have not designated the application for hearing or listed it in **a** competitive bidding public notice as accepted for filing. ***See*** 47 C.F.R. § 1.927. Where **an** amendment to an application constitutes a "major change" as defined in Section 1.929, we treat the amendment as a new application for determination of filing date, public notice, and petition to deny purposes. ***See*** 47 C.F.R. § 1.927(h). Where an amendment to an application specifies **a** substantial change **in** beneficial ownership or control (de jure or de facto) of **an** applicant, the applicant must provide an exhibit with the amended application containing an affirmative, factual showing as set forth in Section 1.948(h)(2). ***See*** 47 C.F.R. § 1.927(g).

[383] Memorandum to WCA Government Relations Committee from Paul J. Sinderbrand. **Esq.,** Petition for Rulemaking - Amendment of Parts 21 and 74. at 11, **August** 1, 2001.

involuntary assignments, and pro forma transfers of control.[384] These licensees use FCC Form 304A to request a partial assignment.[385] However, the assignor should apply for deletion of the assigned facilities, indicating concurrence in an assignee's request.[386] The parties must consummate these transactions within forty-five days from the date of approval.[387] If the parties fail to consummate a partial assignment, the parties must submit FCC Form 304A to return the assignor's license to its original condition.[388] Before the Commission will consent to these transactions, the assignor/transferor must complete construction of the facility and file a certificate of completion of construction.[389]

166. The assignor/transferor must file the certificate of construction within one year from the initial license grant date, the consummation date of the transaction; or median date of the applicable commencement dates if the transaction involves a system of two or more stations. The Commission also requires an assignee/transferee to file FCC Form 430 License Qualification Report with the appropriate application form (Form 305 or Form 306) unless the assignee or transferee already has a current and substantially accurate report on file with the Commission. Finally, the parties of both transactions must notify the Commission of the date of consummation, by letter, within ten days of the date of consummation.

167. ITFS licensees use one form, FCC Form 330, to request an assignment of license or a transfer of control.[390] With both types of transactions, ITFS licensees must file their applications at least forty-five days before the contemplated effective date of the transaction.'" However, in the case of an involuntary transaction, notification must be made to the Commission, in writing, promptly after the death or legal disability of a licensee.[392] Additionally, the Commission requires the filing of an application for involuntary transaction within thirty days of such occurrence.[393]

---

[384] See 47 C.F.R. § 21.11(d) (Assignment of License); 47 C.F.R. § 21.11(e) (Transfer of control of corporation holding a conditional license or license); 47 C.F.R. § 21.13 (General Application Requirements); 47 C.F.R. § 21.15 (Technical Content of Applications); 47 C.F.R. § 21.17 (Certification of Financial Qualifications); 47 C.F.R. § 21.19 (Waiver of Rules); 47 C.F.R. § 21.38 (Assignment *or* Transfer of Station Authorizations); 47 C.F.R. § 21.39 (Considerations Involving Transfer or Assignment Applications); 47 C.F.R. § 21.912 (Cable Television Eligibility Requirements and MDS/Cable Cross Ownership); 47 U.S.C. § 310 (Limitation on Holding and Transfer of Licenses (Alien Ownership Restriction).

[385] 47 C.F.R. § 21.11(e)

[386] *Id.*

[387] *Id.*

[388] *Id.*

[389] See 47 C.F.R. § 21.934. We note that exceptions exist if there is not a substantial change in ownership or control of the authorized facility from the transaction (assignment/transfer); involuntary transaction due to the licensee's bankruptcy. death, or legal disability; and if the transaction involves BTA authorizations. See *id.*

[390] See 47 C.F.R. §§ 74.910, 73.3500

[391] See 47 C.F.R. § 73.3540.

[392] See 47 C.F.R. $73.3541

[393] See47 C.F.R. § 73.3541

168. When the Commission developed FCC Form 603 to process assignment of license and transfer of control applications in ULS, the Commission recognized there would be significant benefits to eliminating inconsistencies between similar services. Specifically, the Commission found that replacing service specific forms with consolidated forms would provide the public with a consistent set of procedures and filing requirements and would increase the speed and accuracy of the assignment and transfer process.'" Although there are some differences in the information requirements for transfers and assignments, there is a sufficient degree of overlap in the information that both types of applicants supply that both **MDS** and ITFS applicants can use the FCC Form 603 for transfers and assignments. Furthermore, we designed the FCC Form 603 so that the applicant only has to answer the questions pertinent to the type of transaction involved.[395] We propose to revise our **MDS** and ITFS transaction requirements to conform to and merge with the ULS requirements in Section 1.948 of **our** rules.

169. Specifically, we propose to eliminate the prior consent requirement for non-substantial, pro forma assignments in **MDS,** and extend the consummation notice period to 180 days for both services. We believe these changes will lessen the administrative burden on applicants, licensees, and Commission staff,. With regard to involuntary assignments, we propose to integrate the **MDS** rules into our ULS consolidated rules. We invite comment on this integration.

170. Further, we propose to revise our channel exchange procedures[396] to conform to our assignment of license procedures. Currently, our rules require both the filing of a major modification application to change a frequency assignment[397] and each licensee seeking to exchange channels to file in tandem with the Commission separate ***pro forma*** assignment applications.[398] Furthermore, our engineers must generate and enter a **minor** modification application into **BLS** for each channel the parties seek to exchange. We find that this channel exchange procedure is unduly burdensome upon licensees and the Commission's resources. The MDS/ITFS community has also asked that we make changes in this area.[399] We propose instead to require the licensees involved to treat channel exchanges like any other set of license transfers, i.e., to file two **or** more applications showing the transferor and transferee for each channel **or** set of channels being transferred.

6. Partitioning and Disaggregation

171. In other services where we have implemented geographic area licensing"' we have allowed licensees to partition their service areas and to disaggregate their spectrum."' **MDS BTA**

---

[394] *ULS R&O*, 13 FCC Rcd at 21079 ¶ 113.

[395] ***Id.***

[396] ***See*** 47 C.F.R. §§ 21.901(d); 74.902(f); 74.951(e).

[397] ***See*** 47 C.F.R. § 74.951(e).

[398] ***See*** 47 C.F.R. § 74.902; **see also** 47 C.F.R. § 21.901

[399] Coalition Proposal at Appendix B n.49.

[400] ***See, e.g.***, 47 C.F.R. §§ 27.15, 101.535, 101.1111, 101.1323.

[401] "Partitioning" is the assignment of geographic portions of a license along geopolitical or other boundaries. "Disaggregation" is the assignment of discrete portions of "blocks" of spectrum licensed to a geographic area licensee or qualifying entity.

licensees may partition their spectrum.[402] We seek comment on whether allowing such flexibility here to all licensees will promote efficient spectrum use, rule consistency and facilitate market entry by parties who may lack the financial resources for participation in ITFS auctions such as small businesses, educational, telemedicine or medical institutions. The Coalition also supports allowing disaggregation and partitioning to the maximum extent possible.[403] Should we allow geographic area licensees of current ITFS channels to partition and disaggregate. Under this proposal, licensees could file for partial assignment of a licensee, and licensees could apply to partition their licensed geographic service areas or disaggregate their licensed spectrum at any time following grant of their geographic area licensee. The area to be partitioned would be defined by the partitioner and partitionee. The partitionee or Oisaggregate would be authorized to hold its license for the remainder of the partitioner's or disaggregator's license term, and would be eligible for renewal expentancy on the same basis as other licensees. There would be no restriction on the amount of spectrum disaggregated and we would permit combined partitioning and disaggregation. Licensees that partition and disaggregate would be subject to provisions against unjust enrichment. We also propose to eliminate any separate provisions relating to "channel swapping" and rely upon the ability of licensees to partition and disaggregate their spectrum.'"'

172. We also seek comment on factors other than geography or frequency that licensees might reasonably use when disaggregating their licenses. For example, the ***Spectrum Policy Report*** discusses the possibility that licensees might also be willing to sell off parts of their license rights on the basis of time slots and power levels.[405] That report suggests that frequency-agile transceivers are already capable of sensing if a given channel is in use at a particular moment in time, by switching channels, reducing power, or remaining silent until a channel becomes available. Should we afford licensees in this band the right to sell spare capacity on that basis to others, on a preemptible basis?

7. License Renewal

173. Except for special temporary authorizations (STAs), MDS licensees must tile FCC Form 405, in duplicate, to renew their licenses.[406] They must file the form between thirty and sixty days before the expiration date of the license to be renewed." A licensee shall automatically forfeit its license in whole or in part without further notice to the licensee upon the expiration of the license period specified therein, unless prior thereto an application for renewal has been filed with the Commission.* An MDS licensee may seek reinstatement of its licenses by filing a petition within 30 days of the license's expiration explaining the failure to timely file the required notification or application and setting out with specificity the procedures that the petititioner has established to ensure that such filings will be submitted on time in the future..[409] Generally, a license period is ten years. The terms of MDS station licenses granted on the basis of underlying BTA service area authorizations obtained by competitive bidding

[402] 47 C.F.R. § 21.931.

[403] Coalition Proposal at 13

[404] See, *e.g.*, 47 C.F.R. § 21.901, 47 C.F.R. § 74.902.

[405] ***Spectrum Policy Report*** at 19.

[406] See 47 C.F.R. § 21.11(c).

[407] Id.

[408] *See* 47 C.F.R. § 21.44(a)(2).

[409] See 47 C.F.R. § 21.43(b).

extend until the end of the ten-year BTA authorization.[410]

174. ITFS licensees must file an FCC Form 330-R to renew a license.[411] Unless otherwise directed by the FCC, ITFS licensees must file their renewal applications no later than the first day of the fourth full month prior to the expiration date of the license to be renewed.[412] Licensees in auctionable services file FCC Form 601 no later than the expiration date of the authorization for which renewal is sought, and no sooner than ninety days prior to expiration. The Commission will reinstate expired ITFS licensees if the former licensee files a timely petition with adequate justification.[413]

175. The Commission designed ULS to provide wireless licensees with a pre-expiration notification approximately ninety days before their licenses expire and thereby avoid situations in which licensees allow their licenses to expire inadvertently and subsequently seek reinstatement.[414] The Commission provides preexpiration letters of reminder to all wireless radio services licensees by regular mail. Specifically, the Commission sends letters of reminder to all wireless radio service licensees, both site-specific and geographic area licensees, ninety days before the expiration of their licenses. Although a license expires automatically on the date specified on the individual license, ULS does not show a license expiration as final until approximately thirty days after the renewal deadline. We note that while we generally provide renewal notices to licensees, the preexpiration notice is not a prerequisite to cancellation should a licensee fail to renew its license. After the license expiration, the previous licensee may file a new application for use of those frequencies subject to any service specific rules. Once that thirty-day period has elapsed, or the prior holder of the license files a new application for that spectrum, the license then becomes available for the Commission to reassign by competitive bidding or other means according to the rules of the particular service.[415]

176. In 1999, the Commission adopted a new policy regarding treatment of late-filed renewal applications in the Wireless Radio Services.[416] Renewal applications that are filed up to thirty days after the expiration date of the license are granted *nunc pro tunc* if the application is otherwise sufficient under our Rules.[417] However, the licensee may be subject to an enforcement action for untimely filing and unauthorized operation during the time between the expiration of the license and the untimely renewal

---

[410] *See* 47 C.F.R. § 21.929(b).

[411] *See Public Notice,* Wireless Telecommunications Bureau Suspends Electronic Filing for the Broadband Licensing System on October 11, 2002, 17 FCC Rcd 18,365 (2002).

[412] *See* 47 C.F.R. § 73.3539.

[413] *See, e.g.,* Jonsson Communications Corp., *Memorandum Opinion and Order,* (DA 02-3099, released Nov. 13, 2002). There is no codified rule specifically addressing reinstatement of ITFS licenses.

[414] *ULS R&O,* 13 FCC Rcd at 21071 ¶ 96

[415] *See* Rules and Regulations to Facilitate the Development and Use of the Universal Licensing System in the Wireless Telecommunications Service, 63 Fed. Reg. 68904. 68908 (1998).

[416] *See* Biennial Regulatory Review - Amendment of Parts 0, 1, 13, 22, 24, 26, 27, 80, 87, 90, 95, and 101 of the Commission's Rules to Facilitate Development and Use of the Universal Licensing System in the Wireless Telecommunications Service, *Memorandum Opinion and Order on Reconsideration.* WT Docket No. 98-20. 14 FCC Rcd 11476, 11485 ¶ 22 (1999).

[417] *See id.* at 11485 ¶ 22.

Applicants who file renewal applications more than thirty days after the license expiration date may also request renewal of the license ***nunc pro tunc***, but such requests are not routinely granted, and are subject to stricter review, and may be accompanied by enforcement action, including more significant fines or forfeitures.[419] In determining whether to grant a late-filed renewal application, we take into consideration all of the facts and circumstances, including the length of the delay in filing, the reasons for the failure to timely file, the potential consequences to the public if the license should terminate, and the performance record of the licensee.[420]

177. We believe that elimination of the reinstatement period will benefit all licensees and entities interested in acquiring abandoned spectrum[421] Under our ULS procedures, failure to file for renewal of the license before the end of the license term results in automatic cancellation of the license.[422] We believe that we should eliminate reinstatement of expired licenses because licensees will receive notification that their licenses are about to expire and, therefore, should be responsible for submitting timely renewal applications. Additionally, interactive electronic filing will make it easier for all licensees to timely file renewal applications. Moreover, we believe elimination of the reinstatement procedures will facilitate our ability to efficiently, and quickly perform our licensing responsibilities by reducing the amount of late-filed renewal applications and eliminating the processing of reinstatement applications. Accordingly, we propose to eliminate reinstatement procedures and adopt the late-filed renewal policy for wireless radio services **for MDS** and ITFS. We seek comment on this proposal. Additionally, **we** seek comment on whether we should impose any special requirements or limitations on the renewal of ITFS licenses. For example, we seek comment on the possibility of imposing special performance requirements on ITFS licensees in order to ensure efficient utilization of the spectrum. We seek comment on these proposals.

8. Special Temporary Authority

178. In MDS, in circumstances requiring immediate or temporary use of facilities, entities may request special temporary authority to install and/or operate new or modified equipment.[423] Requests may be submitted as informal applications, at least ten days prior to the date of the proposed construction or operation (however, in practice an FCC Form 304 is attached to the informal request).[424] We may grant STAs without regard to the thirty-day public notice requirement in certain instances. First, we may grant an STA when the STA period is not to exceed thirty days and the filing of an application to change the STA into a permanent situation is not contemplated. Second, we may grant an STA when the STA period is not to exceed sixty days, pending the filing of an application to change the special situation into a regular operation. Third, we may grant an STA to permit interim operation to facilitate completion of authorized construction or to provide substantially the same service as previously

---

[418] *Id.*

[419] *Id.*

[420] ***Id.*** at 11485-6 ¶ 22.

[421] *ULS R&O*, 13 FCC Rcd at 21,071 ¶ 96. The Commission excluded Commercial Radio Operators Licenses and Amateur licenses from this policy. *Id.*

[422] ***Id.***

[423] ***See*** 41 C.F.R. § 21.25.

[424] 47 **C.F.R. § 21.5.**

authorized. Fourth, we may grant an **STA** when there are extraordinary circumstances requiring operation in the public interest. We may grant STAs and extensions of STAs up to 180 days pursuant to Section 309(f) of the Communications Act where extraordinary circumstances so require, but the licensee has a heavy burden to show it warrants such action. Finally, in times of national emergency or war, we may grant special temporary licenses (in place of construction permits, station licenses, modifications or renewals) for the period of the emergency.[425]

179. We may grant ITFS STAs in extraordinary circumstances requiring emergency operation to serve the public interest.[426] As in MDS. only an informal application **is** required. However. ITFS STA applicants must submit the request at least ten days before the date of the proposed operation. We may grant **ITFS** STAs for a period not to exceed 180 days with a limited number of extensions also granted for up to 180 days. However, we may grant an STA necessitated for technical reasons for an initial period of ninety days only.

180. Under our consolidated ULS approach, applicants must file STA requests electronically **on** an FCC Form 601 within ten days before the date of the proposed operation (although we may grant requests received less than ten days **for** compelling **reasons).**[427] As in MDS/ITFS, grant **of** STAs are without public notice. Wireless Services have the same requirements as MDS/ITFS for thirty, sixty, and 180-day STA requests. In addition, since MDS STA requests are informal applications, but in practice have an FCC Form 304 attached, adoption of the Form 601 for MDS/ITFS STA requests as currently used in WTB makes good sense. Since STAs are an emergency measure, mandatory electronic filing as now required in WTB, would also provide MDS/ITFS licensees with faster, more responsive service. For the foregoing reasons, we propose to include MDS and **ITFS** STA requests under the same ULS regulatory regime **as** the Wireless Services. We request comment on this proposal.

9. Ownership Information

181. MDS and ITFS licensees tile FCC Form **430** to submit ownership information to the Commission. The Communications Act mandates the ownership information requested in Form 430.[428] The submission of ownership information enables the **Commission** to review whether applicants and licensees comply with **our** real-party-in-interest rules, eligibility for treatment as a small business at auction and foreign ownership **restrictions.**[429] Wireless licensees use Form 602 to file ownership information electronically in **ULS.**[430] FCC Form 602 and FCC Form **430** request the same ownership

---

[425] ***Id.***

[426] **See** 47 C.F.R. § 73.3542; **see *also*** 47 C.F.R. §§ 73.1635; 74.910

[427] ***See*** 47 C.F.R. § 1.931

[428] **See** 47 **U.S.C.** § 310.

[429] **See** *ULS NPRM,* **13** FCC Rcd 9672,9691 ¶ 43 (1998).

[430] ULS will pre-fill information that the licensee has previously submitted on a Form 602, enabling the licensee to limit new submissions to changed information, and ULS can also fill in certain parts of a Form 602 by reference to other previously filed information. For example, if Party **A** has previously submitted its own ownership filing and is subsequently listed as a disclosable interest holder on the ownership filing of of another licensee (Party B), Party As FCC-regulated businesses may be automatically copied to Party B's filing. ***Public Notice,*** Wireless Telecommunications Bureau Announces Availability of Electronic Filing of FCC Form 602, 17 FCC Rcd 16,779 ***(2002).***

information.[431] On June 14, 2002, the Wireless Bureau stopped accepting electronically filed Forms 430 temporarily.[432] Therefore, in the short term, MDS and ITFS licensees may continue to file the Form 430 manually. The Form 430 requires the licensee to list its MDS and/or ITFS licenses or conditional licenses. We seek comment on whether this requirement is necessary in light of the proposed transition to ULS.[433] Additionally, we propose to require MDS and ITFS licensees to file Form 602 instead ot Form **430** to submit ownership information. We request comment on this proposal.

10. Regulatory Status

182. Consistent with our goal to maximize flexibility to the extent possible, we tentatively conclude that MDS and ITFS applicants may request more than one regulatory status for authorization in a single license. Thus, under this approach, an MDS or ITFS license may authorize a combination of common carrier and non-common carrier services in a single license and licensees in this band may render any kind of communications service (*e.g.,* fixed, mobile, point-to-multi-point) consistent with that regulatory status and the existing rules. This approach is consistent with the approach we have used for other services licensed on a geographic area basis.'" Applicants would not he required to describe the services they seek to provide but would be required to designate the regulatory status of services they intend to provide using the Form 601.[435] We seek comment on what procedures to adopt for licensees to change their regulatory status (*i.e.*, notify the Commission within a certain timeframe or seek prior approval).

11. Fee Issues

183. Currently, **MDS** applicants and licensees are subject to application fees under Section 8 of the Act, which directs the Commission to assess and collect charges for applications and other filings by regulated entities.[436] These fees were initially set by statute and are subject to adjustment by the Commission [437] MDS licensees are also subject to regulatory fees under Section **9** of the Act.[438] We collect these fees to recover the regulatory costs associated with our enforcement, policy and rulemaking, user information, **and** international activities.[439] Currently, we do not assess ITFS applicants and licensees with either application fees or regulatory fees. The Commission exempted ITFS from

[431] ***See Public Notice,*** Wireless Telecommunications Bureau Answers Frequently Asked Questions Concerning Reporting **of** Ownership Information on FCC Form 602, DA 99-1001 (May 25, 1999).

[432] ***Public Notice,*** Wireless Telecommunications Bureau to Temporarily Suspend Electronic Filing of FCC Form 430 via the Broadband Licensing System, 17 FCC Rcd 11,131(2002).

[433] ***See*** para. 176 ***supra***

[434] *See e.g.*, 47 C.F.R. § 27.10; 47 C.F.R. § § 101.511 and 101.133

[435] *ULS R &O*, 13 FCC Rcd 21027 at Appendix C.

[436] 47 U.S.C. § 158.

[437] ***Id.*** § 158(b)

[438] 47 U.S.C.§ 159.

[439] 47 U.S.C. § 159(a)

application fees because the original statutory schedule of charges did not provide for fees for ITFS applicants and because ITFS stations were "traditionally used by public service organizations."[440]

184. In light of the possible changes to the ITFS service that we are proposing in this proceeding, we seek comment on whether ITFS licensees and applicants (or former licensees of the service, if we decide to reclassify ITFS as a new service) should become subject to application fees and regulatory fees, to the extent that such licensees or applicants do not fall within an express statutory exemption.[441] In light of our contemplated changes to the rules, the fact that MDS and ITFS licensees often provide service as part of the same system, and the fact that ITFS licensees can lease up to ninety-five percent of their capacity to other entities (usually MDS licensees), we seek comment on whether there currently is any valid basis for treating MDS and ITFS applicants and licensees differently for fee purposes. We note that under our proposal, those ITFS licensees that are governmental entities would continue to be exempt under the statute from application fees.[442] We also note that most existing ITFS licensees would likely remain exempt from regulatory fees because they would be covered under the statutory exemptions for governmental entities and nonprofit entities.[443] To the extent we change the eligibility criteria for ITFS, however, we propose to require new licensees that are not statutorily exempt to pay regulatory fees. We seek comment on this proposal.

185. We also seek comment on changing the regulatory fees applicable to MDS licensees. Congress has authorized the Commission to add, delete, or reclassify services in the regulatory fee schedule to reflect additions, deletions, or changes in the nature of its services as a consequence of Commission rulemaking proceedings or changes in law.[444] The instant proceeding proposes major changes to the MDS service, including allowing mobile operation and expediting the use of MDS to provide advanced broadband services. In light of these potential changes, we seek comment on adjusting the regulatory fees for MDS. Currently, we assess MDS stations a regulatory fee of **$450** per station.[445] We note that converting MDS stations to geographic area licensing would reduce the number of MDS licenses. Furthermore, to the extent MDS stations begin offering mobile services, it may be appropriate to begin assessing these licensees on a per unit basis, as we do for other mobile services.[446] Accordingly, we seek comment on the appropriate changes to the regulatory fee structure and amount for MDS licensees. To the extent we conclude that ITFS licensees should pay regulatory fees, we tentatively conclude that the regulatory fees for MDS and ITFS licensees should be the same. We seek comment on this tentative conclusion.

---

[440] Establishment of a Fee Collection Program to Implement the Provisions of the Consolidated Omnibus Budget Reconciliation Act of 1985, *Notice* of Proposed Rulemaking, 51 **Fed.** Reg. 25792 ¶ 68 (1986).

[441] Governmental entities are statutorily exempt from Section 8 fees, and both governmental entities and nonprofit entities are statutorily exempt from Section 9 fees. 47 U.S.C. §§ 158(d)(1), 159(h).

[442] 47 U.S.C. § 158(d)(1).

[443] Compare 47 U.S.C. § 159(h) (exceptions to regulatory fees) and 47 C.F.R. § 74.932 (ITFS eligibility)

[444] 47 U.S.C. § 159(b)(3). Increases or decreases in fees made by amendments pursuant to this paragraph shall not be subject to judicial review. Id.

[445] 47 C.F.R. § 1.1153.

[446] ***See*** 47 C.F.R. § 1.1152 (***CMRS*** Mobile Services and CMRS Messaging Services)